

# **APPENDIX B**

## **SOIL MAP UNITS**

Map Unit Name Taxonomy	Map Unit Reference Code	Drainage Class	Depth to Restrictive Layer (cm)	Hydric Soils
<b>Modoc County</b>				
Alturas loam	103	Moderately well drained	107	No
Balman loam	104	Somewhat poorly drained	>200	Yes
Barnard gravelly loam, 0 to 9 percent slopes	106	Well drained	91	No
Barnard cobbly loam, 0 to 9 percent slopes	107	Well drained	91	No
Barnard clay loam, 9 to 15 percent slopes	108	Well drained	84	No
Bieber gravelly loam, 0 to 9 percent slopes	109	Well drained	46	No
Bieber cobbly loam, 2 to 15 percent slopes, eroded	111	Well drained	41	No
Buntingville clay loam, 0 to 2 percent slopes	112	Somewhat poorly drained	>200	No
Calimus loam, 0 to 2 percent slopes, high precip, mlra 21	114	Well drained	>200	No
Calimus loam, 2 to 9 percent slopes	115	Well drained	>200	No
Calimus gravelly loam, 2 to 5 percent slopes	116	Well drained	>200	No
Casuse sandy loam, 2 to 9 percent slopes	118	Well drained	30	No
Daphnedale stony loam, 30 to 50 percent slopes	121	Well drained	89	No
Daphnedale very cobbly loam, deep variant, 5 to 15 percent slopes	123	Well drained	>200	No
Daphnedale very cobbly loam, deep variant, 30 to 50 percent slope s	124	Well drained	>200	No
Delma loam, 15 to 30 percent slopes, eroded	126	Well drained	36	No
Delma loam, 30 to 50 percent slopes	127	Well drained	46	No
Delma cobbly loam, 0 to 9 percent slopes	128	Well drained	46	No



<b>Map Unit Name Taxonomy</b>	<b>Map Unit Reference Code</b>	<b>Drainage Class</b>	<b>Depth to Restrictive Layer (cm)</b>	<b>Hydric Soils</b>
Delma cobbly loam, 9 to 30 percent slopes	129	Well drained	46	No
Deven-rock outcrop complex, 2 to 30 percent slopes	132	Well drained	41	No
Donica gravelly clay loam, 2 to 9 percent slopes	133	Somewhat excessively drained	>200	No
Drews loam, 0 to 5 percent slopes, goose lake valley, southern part, mlra 21	134	Well drained	>200	No
Drews gravelly loam, 0 to 9 percent slopes	135	Well drained	>200	No
Drews gravelly loam, 15 to 30 percent slopes	136	Well drained	>200	No
Drews clay loam, 2 to 5 percent slopes	137	Well drained	>200	No
Drews clay loam, wet, 0 to 2 percent slopes	138	Well drained	>200	No
Gravel pits	143	N/A	>200	No
Jenny silty clay, 0-5% slopes	145	Moderately well drained	>200	No
Karcad-ninekar complex, 0 to 9 percent slopes	147	Well drained	53	No
Kinkel loam, 2 to 15 percent slopes	148	Well drained	135	No
Ladd sandy loam, 0 to 2 percent slopes	150	Well drained	>200	No
Ladd sandy loam, 2 to 9 percent slopes	151	Well drained	>200	No
Lakeview loam, 0 to 2 percent slopes, pit river area, mlra 21	152	Moderately well drained	>200	No
Lorella loam, 5 to 30 percent slopes	155	Well drained	38	No
Lorella loam, 5 to 30 percent slopes, eroded	156	Well drained	38	No
Lorella loam, 30 to 50 percent slopes	157	Well drained	38	No
Lorella cobbly clay loam, 30 to 50 percent slopes	159	Well drained	38	No
Modoc sandy loam, 0 to 9 percent slopes	168	Well drained	76	No

<b>Map Unit Name Taxonomy</b>	<b>Map Unit Reference Code</b>	<b>Drainage Class</b>	<b>Depth to Restrictive Layer (cm)</b>	<b>Hydric Soils</b>
Modoc gravelly loam, 0 to 9 percent slopes	169	Well drained	76	No
Pasquetti silty clay loam, partially drained	173	Poorly drained	>200	Yes
Pasquetti silty clay loam, drained	174	Poorly drained	>200	Yes
Pineal silt loam	175	Moderately well drained	61	No
Pit silty clay loam, 0 to 2 percent slopes	176	Somewhat poorly drained	>200	Yes
Pit clay, 2 to 5 percent slopes	177	Somewhat poorly drained	>200	Yes
Puls extremely stony clay loam, 0 to 9 percent slopes	179	Well drained	23	No
Rock outcrop-lithic xerorthents complex	183	Excessively drained	>200	No
Rumbo loam, 0 to 2 percent slopes	185	Moderately well drained	>200	No
Salisbury very fine sandy loam, 0 to 9 percent slopes	187	Well drained	25	No
Salisbury gravelly loam, 0 to 9 percent slopes	188	Well drained	25	No
Salisbury clay loam, 9 to 15 percent slopes	190	Well drained	25	No
Thoms-exel complex	192	Well drained	33	No
Tuff outcrop-casuse, eroded complex, 2 to 15 percent slopes	193	Well drained	0	No
Woodcock stony loam, 30 to 50 percent slopes	199	Well drained	117	No
Xerofluvents, occasionally flooded	200	Somewhat excessively drained	>200	No
Drews gravelly loam, 0 to 9 percent slopes	135ma	Well drained	>200	No
Kinkel loam, 2 to 15 percent slopes	148ma	Well drained	135	No
Lorella cobbly clay loam, 30 to 50 percent slopes	159ma	Well drained	38	No
<b>Sierra County</b>				

<b>Map Unit Name Taxonomy</b>	<b>Map Unit Reference Code</b>	<b>Drainage Class</b>	<b>Depth to Restrictive Layer (cm)</b>	<b>Hydric Soils</b>
Northmore sandy loam, 4 to 8 percent slopes	202	Well drained	>200	No
Northmore sandy loam, 8 to 15 percent slopes	203	Well drained	>200	No
<b>Lassen County*</b>				
Galeppi sandy loam, 2 to 5 percent slopes	215	Well drained	>200	No
Galeppi sandy loam, 5 to 30 percent slopes	216	Well drained	>200	No
Galeppi sandy loam, 8 to 15 percent slopes	671	Well drained	>200	No
Galeppi loamy coarse sand, 2 to 5 percent slopes	Gab	Well drained	>200	No
Galeppi loamy coarse sand, 5 to 30 percent slopes	Gae	Well drained	>200	No
Reba sandy loam, 2 to 30 percent slopes	Ree	Well drained	25	No
Rough broken land	Ryf	Excessively drained	>200	No
Saralegui sandy loam, 2 to 15 percent slopes	Sad	Well drained	>200	No
Ardep sandy loam, 0 to 2 percent slopes	104	Well drained	>200	No
Artray sandy loam, 2 to 9 percent slopes	109	Poorly drained	>200	Yes
Badenaugh stony sandy loam, 5 to 15 percent slopes	110	Well drained	>200	No
Barnard stony sandy loam, 2 to 15 percent slopes	114	Well drained	51	No
Bieber cobbly loam, 2 to 9 percent slopes	116	Well drained	46	No
Blickenstaff sandy loam, 0 to 2 percent slopes	120	Moderately well drained	>200	No
Honeylake clay loam, 0 to 1 percent slopes	121	Moderately well drained	>200	No
Bobert sandy loam, 0 to 2 percent slopes	122	Moderately well drained	>200	No
Bonta coarse sandy loam, 9 to 15 percent slopes	124	Well drained	91	No

<b>Map Unit Name Taxonomy</b>	<b>Map Unit Reference Code</b>	<b>Drainage Class</b>	<b>Depth to Restrictive Layer (cm)</b>	<b>Hydric Soils</b>
Buckbay-orhood- fredonyer association, 5 to 30 percent slopes	134	Well drained	74	No
Calpine sandy loam, 0 to 2 percent slopes	143	Well drained	>200	No
Calpine sandy loam, 2 to 5 percent slopes	144	Well drained	>200	No
Calpine, warm, 0 to 15 percent slopes	145	Well drained	>200	No
Cewat-mcconnel-toulon association, 2 to 15 percent slopes	149	Well drained	53	No
Chimney gravelly loamy coarse sand, 2 to 9 percent slopes	152	Somewhat excessively drained	>200	No
Chimney-waterman association, 9 to 30 percent slopes	156	Somewhat excessively drained	>200	No
Cleghorn sandy loam, 2 to 5 percent slopes	159	Well drained	>200	No
Cochran very cobbly loam, 5 to 15 percent slopes	161	Well drained	>200	No
Corral sandy loam, 5 to 15 percent slopes	164	Well drained	30	No
Corral-glenbrook complex, 15 to 50 percent slopes	168	Well drained	30	No
Devada-petescreek- fiddler association, 2 to 30 percent slopes	178	Well drained	38	No
Devada-rock outcrop association, 2 to 50 percent slopes	179	Well drained	38	No
Dryvalley silt loam, sandy substratum, 0 to 2 percent slopes	182	Well drained	>200	Yes
Dryvalley-playas complex, 0 to 2 percent slopes	183	Well drained	>200	Yes
Fiddler-orhood- petescreek association, 5 to 30 percent slopes	197	Well drained	48	No
Fivesprings-longcreek association, 9 to 30 percent slopes	198	Well drained	58	No
Fluvents-riverwash complex, 0 to 1 percent slopes	203	Poorly drained	>200	Yes

<b>Map Unit Name Taxonomy</b>	<b>Map Unit Reference Code</b>	<b>Drainage Class</b>	<b>Depth to Restrictive Layer (cm)</b>	<b>Hydric Soils</b>
Fordney loamy fine sand, wet, 0 to 2 percent slopes	206	Excessively drained	>200	No
Fortsage fine sandy loam, 0 to 2 percent slopes	209	Moderately well drained	>200	No
Fortsage silt loam, 0 to 2 percent slopes	210	Moderately well drained	>200	No
Galeppi sandy loam, 2 to 5 percent slopes	215	Well drained	>200	No
Galeppi sandy loam, 5 to 30 percent slopes	216	Well drained	>200	No
Gerlach cobbly silty clay, 2 to 9 percent slopes	221	Well drained	>200	No
Gerlach-ravendale complex, 0 to 4 percent slopes	222	Well drained	>200	No
Glenbrook-graufels- rock outcrop complex, 30 to 60 percent slopes	229	Somewhat excessively drained	31	No
Graufels-glenbrook complex, 5 to 30 percent slopes	230	Somewhat excessively drained	56	No
Herjun loamy sand, 0 to 2 percent slopes	236	Moderately well drained	>200	No
Honlak loam, 0 to 2 percent slopes	241	Somewhat poorly drained	>200	No
Horsecamp-brubeck association, 2 to 9 percent slopes	243	Well drained	117	No
Humboldt silty clay, 0 to 1 percent slopes, occasionally flooded	247	Poorly drained	>200	No
Humboldt silty clay loam, saline, 0 to 2 percent slopes, occasionally flooded	249	Poorly drained	>200	No
Indiano-searles association, 5 to 30 percent slopes	254	Well drained	69	No
Lakeview loam, 0 to 2 percent slopes, madeline plains area, mlra 21	264	Moderately well drained	>200	No
Longcreek-devada- rubble land complex, 9 to 30 percent slopes	273	Well drained	46	No
Loomis-fivesprings association, 5 to 30 percent slopes	276	Well drained	28	No
Mcconnel-mottsville complex, 2 to 9 percent slopes	283	Somewhat excessively drained	>200	No

<b>Map Unit Name Taxonomy</b>	<b>Map Unit Reference Code</b>	<b>Drainage Class</b>	<b>Depth to Restrictive Layer (cm)</b>	<b>Hydric Soils</b>
Modoc-truax complex, 0 to 2 percent slopes	285	Well drained	71	No
Mottsville loamy coarse sand, 0 to 2 percent slopes	286	Excessively drained	>200	No
Mottsville loamy coarse sand, 2 to 9 percent slopes	287	Excessively drained	>200	No
Mottsville gravelly loamy coarse sand, 0 to 2 percent slopes	288	Excessively drained	>200	No
Mottsville gravelly loamy coarse sand, 2 to 9 percent slopes	289	Excessively drained	>200	No
Mottsville gravelly loamy coarse sand, 9 to 15 percent slopes	290	Excessively drained	>200	No
Mottsville gravelly loamy coarse sand, 15 to 30 percent slopes	291	Excessively drained	>200	No
Mottsville-galeppi association, 15 to 50 percent slopes	292	Excessively drained	>200	No
Pit clay, 0 to 2 percent slopes	324	Poorly drained	>200	Yes
Pits and dumps	325	N/A	>200	No
Plinco gravelly sandy loam, 0 to 2 percent slopes	327	Moderately well drained	>200	No
Plinco loam, 2 to 9 percent slopes	328	Moderately well drained	>200	No
Ravendale silty clay, 0 to 2 percent slopes	333	Moderately well drained	>200	No
Ravendale silty clay, 0 to 2 percent slopes, occasionally flooded	334	Moderately well drained	>200	No
Ravendale silty clay, 0 to 2 percent slopes, ponded	335	Moderately well drained	>200	No
Ravendale silty clay, saline, 0 to 1 percent slopes	336	Moderately well drained	>200	No
Rose creek loam, 0 to 1 percent slopes	341	Poorly drained	>200	No
Rose creek loam, sodic, 0 to 2 percent slopes	342	Poorly drained	>200	No
Rubble land-longcreek-fivesprings association, 30 to 60 percent slopes	344	Well drained	152	No
Saddlerock silty clay, 0 to 2 percent slopes	348	Poorly drained	>200	No

<b>Map Unit Name Taxonomy</b>	<b>Map Unit Reference Code</b>	<b>Drainage Class</b>	<b>Depth to Restrictive Layer (cm)</b>	<b>Hydric Soils</b>
Searles-devada- fivesprings association, 2 to 30 percent slopes	356	Well drained	74	No
Searles-orhood-devada association, 5 to 30 percent slopes	360	Well drained	74	No
Shinnpeak very cobbly loam, 2 to 15 percent slopes	361	Well drained	33	No
Smocreek silt loam, sodic, 0 to 2 percent slopes	362	Somewhat poorly drained	>200	No
Smocreek silty clay loam, 0 to 2 percent slopes	363	Somewhat poorly drained	>200	No
Springmeyer sandy loam, 0 to 5 percent slopes	365	Well drained	>200	No
Springmeyer sandy clay loam, 0 to 2 percent slopes	366	Well drained	>200	No
Standish fine sandy loam, 0 to 2 percent slopes	368	Well drained	>200	No
Susanville-smocreek complex, 0 to 2 percent slopes	372	Moderately well drained	>200	No
Termo-playas complex, 0 to 1 percent slopes	380	Moderately well drained	>200	No
Termo-springmeyer- smocreek complex, 0 to 2 percent slopes	381	Moderately well drained	>200	No
Truax sandy loam, 0 to 5 percent slopes	385	Well drained	127	No
Truckee loam, 0 to 2 percent slopes	386	Poorly drained	>200	No
Tunnison very cobbly clay, 2 to 9 percent slopes	388	Well drained	79	No
Tunnison-devada association, 2 to 9 percent slopes	390	Well drained	79	No
Verdico-chalco association, 2 to 30 percent slopes	395	Well drained	8	No
Zorravista loamy sand, 0 to 5 percent slopes	407	Excessively drained	>200	No
Water	409	N/A	>200	N/A

Note:

\* Some soil map units occur in both Sierra and Lassen Counties. Refer to Appendix A, Figures 2-1 through 2-33 for soils maps.  
cm= centimeter

**APPENDIX C**  
**DELINEATED POTENTIAL WATERS OF**  
**THE U.S.**



Waters_Name	State	Cowardin_Code	HGM_Code	Meas_Type	Amount	Units	Waters_Type	Latitude	Longitude
D001-2	CALIFORNIA	R4SB	RIVERINE	Area	0.013	ACRE	DELINEATE	41.593799	-120.42279800
D001-9	CALIFORNIA	R4SB	RIVERINE	Area	0.02	ACRE	DELINEATE	40.20641	-120.41586000
D002-9	CALIFORNIA	R4SB	RIVERINE	Area	0.011	ACRE	DELINEATE	40.209313	-120.41904000
D002a-2	CALIFORNIA	R3SB	RIVERINE	Area	0.003	ACRE	DELINEATE	41.613628	-120.41685400
D002b-2	CALIFORNIA	R3SB	RIVERINE	Area	0.031	ACRE	DELINEATE	41.613679	-120.41724300
D003-2	CALIFORNIA	R3SB	RIVERINE	Area	0.001	ACRE	DELINEATE	41.626691	-120.40796300
D003-9	CALIFORNIA	R4SB	RIVERINE	Area	0.004	ACRE	DELINEATE	40.216888	-120.42739800
D004-2	CALIFORNIA	R4SB	RIVERINE	Area	0.002	ACRE	DELINEATE	41.636956	-120.40264300
D004-9	CALIFORNIA	R4SB	RIVERINE	Area	0.002	ACRE	DELINEATE	40.220235	-120.43104000
D005-2	CALIFORNIA	<Null>	RIVERINE	Area	0.003	ACRE	DELINEATE	41.650647	-120.39580000
D005-9	CALIFORNIA	R4SB	RIVERINE	Area	0.001	ACRE	DELINEATE	40.228978	-120.44058400
D006-9	CALIFORNIA	R4SB	RIVERINE	Area	0.009	ACRE	DELINEATE	40.232007	-120.44365300
D007-9	CALIFORNIA	R4SB	RIVERINE	Area	0.001	ACRE	DELINEATE	40.235081	-120.44669800
D008-9	CALIFORNIA	<Null>	RIVERINE	Area	0.001	ACRE	DELINEATE	40.179793	-120.38492900
D009-9	CALIFORNIA	R4SB	RIVERINE	Area	0.002	ACRE	DELINEATE	40.185945	-120.39334100
D010-9	CALIFORNIA	R4SB	RIVERINE	Area	0.002	ACRE	DELINEATE	40.189492	-120.39726100
D01-1	CALIFORNIA	R3UB	RIVERINE	Area	0.003	ACRE	DELINEATE	41.783807	-120.37180100
D01-10	CALIFORNIA	R4SB	RIVERINE	Area	0.002	ACRE	DELINEATE	40.099596	-120.19062000
D01-10x	CALIFORNIA	R5	RIVERINE	Area	0.003	ACRE	DELINEATE	40.16718	-120.35718600
D01-11	CALIFORNIA	R4SB	RIVERINE	Area	0.036	ACRE	DELINEATE	39.893544	-120.01662700
D01-11x	CALIFORNIA	R5UB	RIVERINE	Area	0.002	ACRE	DELINEATE	39.892091	-120.01812800
D01-12	CALIFORNIA	R4SB	RIVERINE	Area	0.062	ACRE	DELINEATE	39.77654	-120.04072700
D01-12b	CALIFORNIA	R4SB	RIVERINE	Area	0.011	ACRE	DELINEATE	39.775763	-120.04240600
D01-12bx	CALIFORNIA	R4SB	RIVERINE	Area	0.008	ACRE	DELINEATE	39.776578	-120.03765400
D01-12x	CALIFORNIA	R5UB	RIVERINE	Area	0.008	ACRE	DELINEATE	39.789955	-120.03845100
D011-9	CALIFORNIA	R4SB	RIVERINE	Area	0.005	ACRE	DELINEATE	40.199656	-120.40836100
D011-9bx	CALIFORNIA	R5	RIVERINE	Area	0.001	ACRE	DELINEATE	40.199396	-120.40868500
D012-9	CALIFORNIA	R4SB	RIVERINE	Area	0.004	ACRE	DELINEATE	40.201458	-120.41033600
D012-9bx	CALIFORNIA	R5	RIVERINE	Area	0.001	ACRE	DELINEATE	40.201112	-120.41058700
D01-3	CALIFORNIA	R3UB	RIVERINE	Area	0.006	ACRE	DELINEATE	41.481405	-120.54229200
D013-9	CALIFORNIA	R4SB	RIVERINE	Area	0.006	ACRE	DELINEATE	40.203661	-120.41278700
D013-9bx	CALIFORNIA	R5	RIVERINE	Area	0.004	ACRE	DELINEATE	40.203529	-120.41339100
D01-4	CALIFORNIA	R4SB	RIVERINE	Area	0.007	ACRE	DELINEATE	41.300279	-120.50460200
D01-4bx	CALIFORNIA	R4SB	RIVERINE	Area	0.014	ACRE	DELINEATE	41.300492	-120.50521900
D01-4x	CALIFORNIA	R4SB	RIVERINE	Area	0.017	ACRE	DELINEATE	41.228646	-120.50398400
D01-6x	CALIFORNIA	R4SB	RIVERINE	Area	0.079	ACRE	DELINEATE	40.753396	-120.32979900
D01-7	CALIFORNIA	R3UB	RIVERINE	Area	0.058	ACRE	DELINEATE	40.5924	-120.24832800
D01-9bx	CALIFORNIA	R4SB	RIVERINE	Area	0.002	ACRE	DELINEATE	40.20616	-120.41615400
D01-9x	CALIFORNIA	R5	RIVERINE	Area	0.004	ACRE	DELINEATE	40.221758	-120.43356800
D02-1	CALIFORNIA	R4SB	RIVERINE	Area	0.003	ACRE	DELINEATE	41.910558	-120.33044400
D02-10	CALIFORNIA	R4SB	RIVERINE	Area	0.003	ACRE	DELINEATE	40.122593	-120.24273300
D02-11	CALIFORNIA	R4SB	RIVERINE	Area	0.019	ACRE	DELINEATE	39.908207	-120.01236000
D02-11bx	CALIFORNIA	R3UB	RIVERINE	Area	0.023	ACRE	DELINEATE	39.908128	-120.01311100
D02-11x	CALIFORNIA	R5UB	RIVERINE	Area	0.001	ACRE	DELINEATE	39.891551	-120.01850500
D02-12	CALIFORNIA	R4SB	RIVERINE	Area	0.012	ACRE	DELINEATE	39.776304	-120.04026700
D02-12x	CALIFORNIA	R5UB	RIVERINE	Area	0.008	ACRE	DELINEATE	39.779238	-120.03789700
D02-1bx	CALIFORNIA	R4SB	RIVERINE	Area	0.006	ACRE	DELINEATE	41.910699	-120.33083300
D02-4	CALIFORNIA	<Null>	RIVERINE	Area	0.019	ACRE	DELINEATE	41.231374	-120.50371000
D02-4bx	CALIFORNIA	R3UB	RIVERINE	Area	0.017	ACRE	DELINEATE	41.231496	-120.50421000
D02-6x	CALIFORNIA	R5	RIVERINE	Area	0.02	ACRE	DELINEATE	40.745634	-120.32412100

D02-9bx	CALIFORNIA	R4SB	RIVERINE	Area	0.002 ACRE	DELINEATE	40.208976 -120.41924300
D02-9x	CALIFORNIA	R5	RIVERINE	Area	0.003 ACRE	DELINEATE	40.193477 -120.40219800
D02a-3	CALIFORNIA	R3SB	RIVERINE	Area	0.445 ACRE	DELINEATE	41.461324 -120.55024900
D02b-3	CALIFORNIA	R3UB	RIVERINE	Area	0.805 ACRE	DELINEATE	41.460607 -120.54921700
D03-1	CALIFORNIA	RFT	RIVERINE	Area	0.001 ACRE	DELINEATE	41.927594 -120.32262400
D03-10	CALIFORNIA	R4SB	RIVERINE	Area	0.024 ACRE	DELINEATE	40.14101 -120.27852100
D03-10bx	CALIFORNIA	R5	RIVERINE	Area	0.004 ACRE	DELINEATE	40.140482 -120.27809700
D03-11	CALIFORNIA	R4UB	RIVERINE	Area	0.006 ACRE	DELINEATE	39.921807 -120.01856100
D03-11bx	CALIFORNIA	R5	RIVERINE	Area	0.01 ACRE	DELINEATE	39.87905 -120.02843800
D03-11x	CALIFORNIA	R5UB	RIVERINE	Area	0.013 ACRE	DELINEATE	39.879414 -120.02825700
D03-12	CALIFORNIA	R4SB	RIVERINE	Area	0.02 ACRE	DELINEATE	39.775876 -120.04090600
D03-1bx	CALIFORNIA	R4SB	RIVERINE	Area	0.009 ACRE	DELINEATE	41.92768 -120.32295700
D03-3	CALIFORNIA	<Null>	RIVERINE	Area	2.796 ACRE	DELINEATE	41.42841 -120.54676300
D03-4	CALIFORNIA	R3UB	RIVERINE	Area	0.01 ACRE	DELINEATE	41.235049 -120.50384700
D03-4bx	CALIFORNIA	R3UB	RIVERINE	Area	0.013 ACRE	DELINEATE	41.235002 -120.50426200
D03-6x	CALIFORNIA	R5UB	RIVERINE	Area	0.001 ACRE	DELINEATE	40.723282 -120.30796100
D03-9x	CALIFORNIA	R4SB	RIVERINE	Area	0.001 ACRE	DELINEATE	40.17617 -120.37982500
D04-1	CALIFORNIA	R3SB	RIVERINE	Area	0.011 ACRE	DELINEATE	41.945195 -120.31452000
D04-10	CALIFORNIA	R4SB	RIVERINE	Area	0.011 ACRE	DELINEATE	40.154227 -120.30976700
D04-10bx	CALIFORNIA	R5	RIVERINE	Area	0.007 ACRE	DELINEATE	40.153825 -120.30976900
D04-10x	CALIFORNIA	R4SB	RIVERINE	Area	0.094 ACRE	DELINEATE	40.005808 -120.08967800
D04-11	CALIFORNIA	R3UB	RIVERINE	Area	0.361 ACRE	DELINEATE	39.931347 -120.01933800
D04-11bx	CALIFORNIA	R3UB	RIVERINE	Area	0.655 ACRE	DELINEATE	39.906946 -120.01310400
D04-11cx	CALIFORNIA	<Null>	RIVERINE	Area	0.049 ACRE	DELINEATE	39.923279 -120.01960500
D04-11dx	CALIFORNIA	R3UB	RIVERINE	Area	0.528 ACRE	DELINEATE	39.89343 -120.01752400
D04-11x	CALIFORNIA	R5UB	RIVERINE	Area	0.089 ACRE	DELINEATE	39.85951 -120.04095900
D04-12	CALIFORNIA	R4SB	RIVERINE	Area	0.015 ACRE	DELINEATE	39.768151 -120.03958700
D04-12bx	CALIFORNIA	R5UB	RIVERINE	Area	0.013 ACRE	DELINEATE	39.768482 -120.03827500
D04-1bx	CALIFORNIA	R4SB	RIVERINE	Area	0.006 ACRE	DELINEATE	41.945278 -120.31485600
D04-4	CALIFORNIA	R4SB	RIVERINE	Area	0.006 ACRE	DELINEATE	41.237148 -120.50388500
D04-4bx	CALIFORNIA	R4SB	RIVERINE	Area	0.013 ACRE	DELINEATE	41.237153 -120.50432200
D04-7	CALIFORNIA	R4SB	RIVERINE	Area	0.013 ACRE	DELINEATE	40.391164 -120.30697000
D04-7bx	CALIFORNIA	R4SB	RIVERINE	Area	0.023 ACRE	DELINEATE	40.391663 -120.30713800
D04-9bx	CALIFORNIA	R5	RIVERINE	Area	0.005 ACRE	DELINEATE	40.219773 -120.43140100
D04a-12	CALIFORNIA	R4SB	RIVERINE	Area	0.039 ACRE	DELINEATE	39.768635 -120.03923900
D04a-3	CALIFORNIA	R3UB	RIVERINE	Area	0.311 ACRE	DELINEATE	41.415932 -120.54507900
D04b-3	CALIFORNIA	R3UB	RIVERINE	Area	1.15 ACRE	DELINEATE	41.416874 -120.54367400
D05-1	CALIFORNIA	R3SB	RIVERINE	Area	0.002 ACRE	DELINEATE	41.956997 -120.30908700
D05-10	CALIFORNIA	R3UB	RIVERINE	Area	0.005 ACRE	DELINEATE	40.165194 -120.34885700
D05-10bx	CALIFORNIA	R3UB	RIVERINE	Area	0.019 ACRE	DELINEATE	40.164924 -120.34896200
D05-11	CALIFORNIA	R4SB	RIVERINE	Area	0.004 ACRE	DELINEATE	39.820447 -120.03508100
D05-12	CALIFORNIA	R4SB	RIVERINE	Area	0.016 ACRE	DELINEATE	39.76451 -120.03966300
D05-1bx	CALIFORNIA	R4SB	RIVERINE	Area	0.001 ACRE	DELINEATE	41.957098 -120.30944900
D05-3	CALIFORNIA	<Null>	RIVERINE	Area	0.009 ACRE	DELINEATE	41.476489 -120.54280100
D05-4	CALIFORNIA	R3SB	RIVERINE	Area	0.051 ACRE	DELINEATE	41.238224 -120.50392700
D05-4bx	CALIFORNIA	R3SB	RIVERINE	Area	0.034 ACRE	DELINEATE	41.23818 -120.50433300
D05-6x	CALIFORNIA	R3SB	RIVERINE	Area	0.009 ACRE	DELINEATE	40.642098 -120.25584900
D05-7	CALIFORNIA	R4SB	RIVERINE	Area	0.061 ACRE	DELINEATE	40.405895 -120.28731000
D05-9bx	CALIFORNIA	R4SB	RIVERINE	Area	0.008 ACRE	DELINEATE	40.228739 -120.44095500
D06-1	CALIFORNIA	R3UB	RIVERINE	Area	0.002 ACRE	DELINEATE	41.958348 -120.30846800
D06-10	CALIFORNIA	R3UB	RIVERINE	Area	0.005 ACRE	DELINEATE	40.166463 -120.35293300

D06-11	CALIFORNIA	R4SB	RIVERINE	Area	0.01 ACRE	DELINEATE	39.823938 -120.03595700
D06-12	CALIFORNIA	R4SB	RIVERINE	Area	0.007 ACRE	DELINEATE	39.748588 -120.04009500
D06-4	CALIFORNIA	R4SB	RIVERINE	Area	0.018 ACRE	DELINEATE	41.240667 -120.50394600
D06-4bx	CALIFORNIA	R4SB	RIVERINE	Area	0.012 ACRE	DELINEATE	41.240947 -120.50446000
D06-6x	CALIFORNIA	R5	RIVERINE	Area	0.09 ACRE	DELINEATE	40.634674 -120.25276600
D06-9bx	CALIFORNIA	R4SB	RIVERINE	Area	0.015 ACRE	DELINEATE	40.231835 -120.44397000
D07-1	CALIFORNIA	R4SB	RIVERINE	Area	0.005 ACRE	DELINEATE	41.963668 -120.30602700
D07-10	CALIFORNIA	R4SB	RIVERINE	Area	0.003 ACRE	DELINEATE	40.168977 -120.36424400
D07-11	CALIFORNIA	R4SB	RIVERINE	Area	0.011 ACRE	DELINEATE	39.82953 -120.03725200
D07-11bx	CALIFORNIA	R5UB	RIVERINE	Area	0.003 ACRE	DELINEATE	39.829504 -120.03774500
D07-12	CALIFORNIA	R4SB	RIVERINE	Area	0.01 ACRE	DELINEATE	39.744004 -120.04022800
D07-1bx	CALIFORNIA	R4SB	RIVERINE	Area	0.005 ACRE	DELINEATE	41.963668 -120.30639600
D07-4	CALIFORNIA	R4UB	RIVERINE	Area	0.01 ACRE	DELINEATE	41.242297 -120.50398800
D07-4bx	CALIFORNIA	R4UB	RIVERINE	Area	0.002 ACRE	DELINEATE	41.242291 -120.50435700
D07-4cx	CALIFORNIA	R4UB	RIVERINE	Area	0.002 ACRE	DELINEATE	41.242271 -120.50456800
D07-9bx	CALIFORNIA	R4SB	RIVERINE	Area	0.002 ACRE	DELINEATE	40.234883 -120.44701300
D08-10	CALIFORNIA	R3UB	RIVERINE	Area	0.007 ACRE	DELINEATE	40.171131 -120.37154800
D08-10bx	CALIFORNIA	R3UB	RIVERINE	Area	0.011 ACRE	DELINEATE	40.171043 -120.37189900
D08-11	CALIFORNIA	R4SB	RIVERINE	Area	0.015 ACRE	DELINEATE	39.832502 -120.03794600
D08-12	CALIFORNIA	R4SB	RIVERINE	Area	0.007 ACRE	DELINEATE	39.74157 -120.04021000
D08-4	CALIFORNIA	R4SB	RIVERINE	Area	0.037 ACRE	DELINEATE	41.245936 -120.50400700
D08-4bx	CALIFORNIA	R4SB	RIVERINE	Area	0.025 ACRE	DELINEATE	41.245918 -120.50457900
D09-11	CALIFORNIA	R4SB	RIVERINE	Area	0.004 ACRE	DELINEATE	39.833337 -120.03809600
D09-12	CALIFORNIA	R4SB	RIVERINE	Area	0.005 ACRE	DELINEATE	39.728348 -120.03920100
D09-12bx	CALIFORNIA	R5UB	RIVERINE	Area	0.007 ACRE	DELINEATE	39.72841 -120.03778800
D09-4	CALIFORNIA	R4SB	RIVERINE	Area	0.106 ACRE	DELINEATE	41.276607 -120.50288700
D09-4bx	CALIFORNIA	R4SB	RIVERINE	Area	0.078 ACRE	DELINEATE	41.276864 -120.50385000
D100-1	CALIFORNIA	R4SB	RIVERINE	Area	0.007 ACRE	DELINEATE	41.822216 -120.35070800
D100-10	CALIFORNIA	R4SB	RIVERINE	Area	0.01 ACRE	DELINEATE	40.015018 -120.10188100
D100-10bx	CALIFORNIA	R4SB	RIVERINE	Area	0.007 ACRE	DELINEATE	40.014459 -120.10228200
D100-10x	CALIFORNIA	R5	RIVERINE	Area	0.004 ACRE	DELINEATE	40.138009 -120.27262800
D100-11	CALIFORNIA	R4SB	RIVERINE	Area	0.023 ACRE	DELINEATE	39.882568 -120.02431300
D100-11bx	CALIFORNIA	R5UB	RIVERINE	Area	0.012 ACRE	DELINEATE	39.882989 -120.02499000
D100-11x	CALIFORNIA	PUB	RIVERINE	Area	0.194 ACRE	DELINEATE	39.905271 -120.01344700
D100-12a	CALIFORNIA	R4SB	RIVERINE	Area	0.016 ACRE	DELINEATE	39.789754 -120.03814300
D100-12b	CALIFORNIA	R4SB	RIVERINE	Area	0.009 ACRE	DELINEATE	39.789438 -120.03807000
D100-1bx	CALIFORNIA	R4SB	RIVERINE	Area	0.007 ACRE	DELINEATE	41.822408 -120.35144500
D100-1x	CALIFORNIA	R4SB	RIVERINE	Area	0.002 ACRE	DELINEATE	41.893311 -120.33827100
D100-2	CALIFORNIA	R4UB	RIVERINE	Area	0.009 ACRE	DELINEATE	41.709297 -120.37508100
D100-3	CALIFORNIA	R3SB	RIVERINE	Area	0.04 ACRE	DELINEATE	41.319293 -120.50733400
D100-3bx	CALIFORNIA	R3SB	RIVERINE	Area	0.062 ACRE	DELINEATE	41.319279 -120.50789800
D100-4	CALIFORNIA	R3UB	RIVERINE	Area	0.027 ACRE	DELINEATE	41.224574 -120.50355900
D100-4bx	CALIFORNIA	R3UB	RIVERINE	Area	0.014 ACRE	DELINEATE	41.224684 -120.50401200
D100-4x	CALIFORNIA	R5	RIVERINE	Area	0.006 ACRE	DELINEATE	41.079169 -120.46956300
D100-5	CALIFORNIA	R4SB	RIVERINE	Area	0.02 ACRE	DELINEATE	40.856135 -120.44609500
D100-5xb	CALIFORNIA	R5	RIVERINE	Area	0.031 ACRE	DELINEATE	40.855873 -120.44639700
D100-6	CALIFORNIA	R4SB	RIVERINE	Area	0.004 ACRE	DELINEATE	40.826307 -120.40403000
D100-7x	CALIFORNIA	R4SB	RIVERINE	Area	0.064 ACRE	DELINEATE	40.543399 -120.25991500
D100-8	CALIFORNIA	R3UB	RIVERINE	Area	0.007 ACRE	DELINEATE	40.36611 -120.40333200
D100-8bx	CALIFORNIA	R3UB	RIVERINE	Area	0.011 ACRE	DELINEATE	40.366259 -120.40347400
D100-Bx	CALIFORNIA	R4SB	RIVERINE	Area	0.004 ACRE	DELINEATE	41.893467 -120.33815300

D101-1	CALIFORNIA	<Null>	RIVERINE	Area	0.01 ACRE	DELINEATE	41.834046 -120.35716200
D10-11	CALIFORNIA	R4SB	RIVERINE	Area	0.005 ACRE	DELINEATE	39.836762 -120.03884800
D101-10	CALIFORNIA	R3UB	RIVERINE	Area	0.014 ACRE	DELINEATE	40.034334 -120.10987700
D101-10bx	CALIFORNIA	R3UB	RIVERINE	Area	0.981 ACRE	DELINEATE	40.0334 -120.11004900
D101-11	CALIFORNIA	R4SB	RIVERINE	Area	0.001 ACRE	DELINEATE	39.882762 -120.02447900
D101-1bx	CALIFORNIA	R4SB	RIVERINE	Area	0.006 ACRE	DELINEATE	41.833341 -120.35704400
D101-2	CALIFORNIA	R4UB	RIVERINE	Area	0.001 ACRE	DELINEATE	41.710186 -120.37505700
D10-12	CALIFORNIA	R4SB	RIVERINE	Area	0.067 ACRE	DELINEATE	39.724146 -120.03817200
D101-3	CALIFORNIA	R4SB	RIVERINE	Area	0.038 ACRE	DELINEATE	41.318647 -120.50726700
D101-6	CALIFORNIA	<Null>	RIVERINE	Area	0.003 ACRE	DELINEATE	40.826962 -120.40549500
D101-8	CALIFORNIA	R3UB	RIVERINE	Area	0.015 ACRE	DELINEATE	40.377594 -120.39510000
D101-8bx	CALIFORNIA	R3UB	RIVERINE	Area	0.02 ACRE	DELINEATE	40.377778 -120.39512700
D102-1	CALIFORNIA	R4SB	RIVERINE	Area	0.007 ACRE	DELINEATE	41.840204 -120.35808600
D102-10	CALIFORNIA	R3UB	RIVERINE	Area	0.126 ACRE	DELINEATE	40.05196 -120.12641100
D102-10bx	CALIFORNIA	R3UB	RIVERINE	Area	0.215 ACRE	DELINEATE	40.05182 -120.12685500
D102-11	CALIFORNIA	R4SB	RIVERINE	Area	0.063 ACRE	DELINEATE	39.870288 -120.03475700
D102-11bx	CALIFORNIA	R5UB	RIVERINE	Area	0.011 ACRE	DELINEATE	39.872122 -120.03418300
D102-1bx	CALIFORNIA	R5	RIVERINE	Area	0.01 ACRE	DELINEATE	41.84036 -120.35903400
D102-2	CALIFORNIA	R4SB	RIVERINE	Area	0.001 ACRE	DELINEATE	41.714289 -120.37503900
D102-3	CALIFORNIA	R4SB	RIVERINE	Area	0.007 ACRE	DELINEATE	41.328386 -120.50913100
D102-3bx	CALIFORNIA	R4SB	RIVERINE	Area	0.009 ACRE	DELINEATE	41.328123 -120.51003200
D102-7x	CALIFORNIA	R5	RIVERINE	Area	0.025 ACRE	DELINEATE	40.540497 -120.26065800
D102-8	CALIFORNIA	R4SB	RIVERINE	Area	0.006 ACRE	DELINEATE	40.380189 -120.37765900
D102-8bx	CALIFORNIA	R4SB	RIVERINE	Area	0.006 ACRE	DELINEATE	40.380482 -120.37785400
D103-1	CALIFORNIA	R4SB	RIVERINE	Area	0.011 ACRE	DELINEATE	41.841327 -120.35818700
D103-10	CALIFORNIA	R4UB	RIVERINE	Area	0.014 ACRE	DELINEATE	40.072663 -120.14595800
D103-11	CALIFORNIA	R4SB	RIVERINE	Area	0.005 ACRE	DELINEATE	39.870303 -120.03491500
D103-1bx	CALIFORNIA	R5	RIVERINE	Area	0.019 ACRE	DELINEATE	41.841078 -120.35903200
D103-3bx	CALIFORNIA	R4SB	RIVERINE	Area	0.143 ACRE	DELINEATE	41.339862 -120.51258900
D103-7bx	CALIFORNIA	R5	RIVERINE	Area	0.026 ACRE	DELINEATE	40.406391 -120.28821900
D103-7x	CALIFORNIA	R5	RIVERINE	Area	0.086 ACRE	DELINEATE	40.410958 -120.28780900
D103-8	CALIFORNIA	R4UB	RIVERINE	Area	0.024 ACRE	DELINEATE	40.350739 -120.42308200
D103a-3	CALIFORNIA	R4SB	RIVERINE	Area	0.008 ACRE	DELINEATE	41.339515 -120.51178000
D103b-3	CALIFORNIA	R4SB	RIVERINE	Area	0.011 ACRE	DELINEATE	41.339468 -120.51180200
D104-1	CALIFORNIA	R4SB	RIVERINE	Area	0.002 ACRE	DELINEATE	41.861394 -120.35154200
D104-10	CALIFORNIA	R3UB	RIVERINE	Area	0.031 ACRE	DELINEATE	40.073281 -120.14654200
D104-10bx	CALIFORNIA	R3UB	RIVERINE	Area	0.067 ACRE	DELINEATE	40.073007 -120.14692000
D104-11	CALIFORNIA	R4SB	RIVERINE	Area	0.001 ACRE	DELINEATE	39.868943 -120.03560500
D104-2	CALIFORNIA	R5UB	RIVERINE	Area	0.026 ACRE	DELINEATE	41.733697 -120.37512900
D104-3	CALIFORNIA	R3UB	RIVERINE	Area	0.286 ACRE	DELINEATE	41.35692 -120.52470000
D104-7bx	CALIFORNIA	R5	RIVERINE	Area	0.322 ACRE	DELINEATE	40.447184 -120.27928500
D104-7x	CALIFORNIA	R5	RIVERINE	Area	1.412 ACRE	DELINEATE	40.458213 -120.27892400
D104-8	CALIFORNIA	R4SB	RIVERINE	Area	0.001 ACRE	DELINEATE	40.347087 -120.42278700
D104-8bx	CALIFORNIA	R4SB	RIVERINE	Area	0.001 ACRE	DELINEATE	40.347095 -120.42259800
D105-1	CALIFORNIA	R4SB	RIVERINE	Area	0.005 ACRE	DELINEATE	41.863899 -120.35033200
D105-10	CALIFORNIA	R3UB	RIVERINE	Area	0.001 ACRE	DELINEATE	40.073377 -120.14654500
D105-11	CALIFORNIA	R4SB	RIVERINE	Area	0.001 ACRE	DELINEATE	39.868981 -120.03558100
D105-2	CALIFORNIA	R5UB	RIVERINE	Area	0.001 ACRE	DELINEATE	41.736441 -120.37534100
D105-2bx	CALIFORNIA	R3UB	RIVERINE	Area	0.002 ACRE	DELINEATE	41.736478 -120.37570200
D105-3a	CALIFORNIA	R3UB	RIVERINE	Area	0.043 ACRE	DELINEATE	41.361323 -120.52995400
D105-3b	CALIFORNIA	R4UB	RIVERINE	Area	0.147 ACRE	DELINEATE	41.359262 -120.52734100

D105-3c	CALIFORNIA	R4UB	RIVERINE	Area	0.078 ACRE	DELINEATE	41.355761 -120.52307600
D105-8	CALIFORNIA	R4SB	RIVERINE	Area	0.003 ACRE	DELINEATE	40.343428 -120.42277300
D105-8bx	CALIFORNIA	R4SB	RIVERINE	Area	0.001 ACRE	DELINEATE	40.343356 -120.42258400
D106-1	CALIFORNIA	R4SB	RIVERINE	Area	0.004 ACRE	DELINEATE	41.867187 -120.34837500
D106-10	CALIFORNIA	R4UB	RIVERINE	Area	0.018 ACRE	DELINEATE	39.967459 -120.04962900
D106-11	CALIFORNIA	R4SB	RIVERINE	Area	0.001 ACRE	DELINEATE	39.86916 -120.03550400
D106-1bx	CALIFORNIA	R4SB	RIVERINE	Area	0.008 ACRE	DELINEATE	41.867672 -120.34912200
D106-2	CALIFORNIA	R5UB	RIVERINE	Area	0.004 ACRE	DELINEATE	41.737077 -120.37539700
D106-2bx	CALIFORNIA	R3UB	RIVERINE	Area	0.006 ACRE	DELINEATE	41.737157 -120.37577700
D106-8	CALIFORNIA	R4SB	RIVERINE	Area	0.003 ACRE	DELINEATE	40.285919 -120.48440800
D106-8bx	CALIFORNIA	R4SB	RIVERINE	Area	0.001 ACRE	DELINEATE	40.286034 -120.48454600
D107-1	CALIFORNIA	R4SB	RIVERINE	Area	0.025 ACRE	DELINEATE	41.876653 -120.34492000
D107-10	CALIFORNIA	R3UB	RIVERINE	Area	0.031 ACRE	DELINEATE	39.994919 -120.07847100
D107-10bx	CALIFORNIA	R3UB	RIVERINE	Area	0.015 ACRE	DELINEATE	39.99457 -120.07891700
D107-2	CALIFORNIA	R4UB	RIVERINE	Area	0.002 ACRE	DELINEATE	41.738373 -120.37549900
D107-8	CALIFORNIA	R3UB	RIVERINE	Area	0.004 ACRE	DELINEATE	40.304452 -120.47829500
D107-8bx	CALIFORNIA	R3UB	RIVERINE	Area	0.001 ACRE	DELINEATE	40.304477 -120.47848900
D108-2	CALIFORNIA	R5UB	RIVERINE	Area	0.002 ACRE	DELINEATE	41.739125 -120.37556500
D108-2bx	CALIFORNIA	R5UB	RIVERINE	Area	0.002 ACRE	DELINEATE	41.73915 -120.37589500
D108-8	CALIFORNIA	R4SB	RIVERINE	Area	0.001 ACRE	DELINEATE	40.311499 -120.45224400
D108-8bx	CALIFORNIA	R4SB	RIVERINE	Area	0.003 ACRE	DELINEATE	40.311716 -120.45230500
D109-2	CALIFORNIA	R4UB	RIVERINE	Area	0.002 ACRE	DELINEATE	41.740605 -120.37565000
D109-2bx	CALIFORNIA	R5UB	RIVERINE	Area	0.002 ACRE	DELINEATE	41.740774 -120.37599800
D110-2	CALIFORNIA	R5UB	RIVERINE	Area	0.008 ACRE	DELINEATE	41.744675 -120.37558600
D110-2bx	CALIFORNIA	R3UB	RIVERINE	Area	0.015 ACRE	DELINEATE	41.744829 -120.37592000
D11-11	CALIFORNIA	R4UB	RIVERINE	Area	0.005 ACRE	DELINEATE	39.837832 -120.03908500
D111-2	CALIFORNIA	R5UB	RIVERINE	Area	0.004 ACRE	DELINEATE	41.745098 -120.37554700
D11-12	CALIFORNIA	R4SB	RIVERINE	Area	0.007 ACRE	DELINEATE	39.712856 -120.03695600
D111-2bx	CALIFORNIA	R3UB	RIVERINE	Area	0.003 ACRE	DELINEATE	41.745255 -120.37589600
D11-12bx	CALIFORNIA	R4SB	RIVERINE	Area	0.005 ACRE	DELINEATE	39.712717 -120.03552000
D11-1x	CALIFORNIA	<Null>	RIVERINE	Area	0.001 ACRE	DELINEATE	41.936765 -120.31879600
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D112-2bx	CALIFORNIA	R5	RIVERINE	Area	0.007 ACRE	DELINEATE	41.56522 -120.43986700
D113-2	CALIFORNIA	R4UB	RIVERINE	Area	0.003 ACRE	DELINEATE	41.567729 -120.43750300
D113-2bx	CALIFORNIA	R5	RIVERINE	Area	0.005 ACRE	DELINEATE	41.568044 -120.43777000
D114-2	CALIFORNIA	R4UB	RIVERINE	Area	0.003 ACRE	DELINEATE	41.570555 -120.43588400
D114-2bx	CALIFORNIA	R5	RIVERINE	Area	0.001 ACRE	DELINEATE	41.570674 -120.43629300
D115-2	CALIFORNIA	R4UB	RIVERINE	Area	0.014 ACRE	DELINEATE	41.574854 -120.43550900
D115-2bx	CALIFORNIA	R5	RIVERINE	Area	0.002 ACRE	DELINEATE	41.574451 -120.43597100
D116-2	CALIFORNIA	R4UB	RIVERINE	Area	0.004 ACRE	DELINEATE	41.57516 -120.43553100
D11-7	CALIFORNIA	<Null>	RIVERINE	Area	0.026 ACRE	DELINEATE	40.63605 -120.25245200
D117-2	CALIFORNIA	R4UB	RIVERINE	Area	0.002 ACRE	DELINEATE	41.577945 -120.43534300
D12-11	CALIFORNIA	R4UB	RIVERINE	Area	0.005 ACRE	DELINEATE	39.84324 -120.04035700
D12-12	CALIFORNIA	R4SB	RIVERINE	Area	0.002 ACRE	DELINEATE	39.706107 -120.03478900
D12-1x	CALIFORNIA	R4SB	RIVERINE	Area	0.016 ACRE	DELINEATE	41.934177 -120.31997000
D12-2x	CALIFORNIA	R4SB	RIVERINE	Area	0.002 ACRE	DELINEATE	41.729624 -120.37534900
D13-11	CALIFORNIA	R4UB	RIVERINE	Area	0.011 ACRE	DELINEATE	39.847481 -120.04134400
D13-12	CALIFORNIA	R4SB	RIVERINE	Area	0.006 ACRE	DELINEATE	39.694471 -120.02383500
D13-12bx	CALIFORNIA	R4SB	RIVERINE	Area	0.006 ACRE	DELINEATE	39.695093 -120.02260600
D13-2x	CALIFORNIA	R4SB	RIVERINE	Area	0.001 ACRE	DELINEATE	41.728526 -120.37537100
D14-11	CALIFORNIA	R4SB	RIVERINE	Area	0.035 ACRE	DELINEATE	39.86085800 -120.040312

D14-11bx	CALIFORNIA	R4SB	RIVERINE	Area	0.557 ACRE	DELINEATE	39.86261 -120.04080000
D14-12	CALIFORNIA	R4SB	RIVERINE	Area	0.001 ACRE	DELINEATE	39.681144 -120.00959400
D14-1x	CALIFORNIA	R4SB	RIVERINE	Area	0.005 ACRE	DELINEATE	41.913295 -120.32963100
D14-2x	CALIFORNIA	R4SB	RIVERINE	Area	0.008 ACRE	DELINEATE	41.719482 -120.37538800
D150-2x	CALIFORNIA	R4SB	RIVERINE	Area	0.011 ACRE	DELINEATE	41.696592 -120.37574700
D15-11	CALIFORNIA	R4UB	RIVERINE	Area	0.009 ACRE	DELINEATE	39.861912 -120.04017800
D15-12	CALIFORNIA	R4SB	RIVERINE	Area	0.001 ACRE	DELINEATE	39.674069 -120.00211500
D15-2x	CALIFORNIA	R4SB	RIVERINE	Area	0.008 ACRE	DELINEATE	41.71429 -120.37542400
D16-11	CALIFORNIA	R4UB	RIVERINE	Area	0.049 ACRE	DELINEATE	39.866392 -120.03749200
D16-12	CALIFORNIA	R4SB	RIVERINE	Area	0.001 ACRE	DELINEATE	39.67409 -120.00212100
D16-1x	CALIFORNIA	R4SB	RIVERINE	Area	0.002 ACRE	DELINEATE	41.908592 -120.33179800
D16-2bx	CALIFORNIA	R4SB	RIVERINE	Area	0.039 ACRE	DELINEATE	41.704106 -120.37546500
D16-2cx	CALIFORNIA	R4SB	RIVERINE	Area	0.042 ACRE	DELINEATE	41.700796 -120.37543100
D16-2x	CALIFORNIA	R4SB	RIVERINE	Area	0.137 ACRE	DELINEATE	41.707604 -120.37549800
D17-1x	CALIFORNIA	R4SB	RIVERINE	Area	0.001 ACRE	DELINEATE	41.907632 -120.33230800
D17-2X	CALIFORNIA	R4SB	RIVERINE	Area	0.001 ACRE	DELINEATE	41.57805 -120.43583100
D1-7bx	CALIFORNIA	R3UB	RIVERINE	Area	0.276 ACRE	DELINEATE	40.591345 -120.24914100
D1-7cx	CALIFORNIA	R3UB	RIVERINE	Area	0.134 ACRE	DELINEATE	40.585741 -120.25074400
D18-1x	CALIFORNIA	R4SB	RIVERINE	Area	0.003 ACRE	DELINEATE	41.904027 -120.33389600
D18-2x	CALIFORNIA	R5UB	RIVERINE	Area	0.002 ACRE	DELINEATE	41.68644 -120.37690500
D18-3x	CALIFORNIA	R3UB	RIVERINE	Area	0.943 ACRE	DELINEATE	41.523012 -120.47596800
D1-8x	CALIFORNIA	R4SB	RIVERINE	Area	0.012 ACRE	DELINEATE	40.343101 -120.42257400
D19-1x	CALIFORNIA	R4SB	RIVERINE	Area	0.015 ACRE	DELINEATE	41.901945 -120.33488000
D19-2x	CALIFORNIA	R3UB	RIVERINE	Area	0.007 ACRE	DELINEATE	41.681232 -120.37968800
D200-10	CALIFORNIA	R4UB	RIVERINE	Area	0.011 ACRE	DELINEATE	40.017999 -120.10435900
D200-10bx	CALIFORNIA	R5	RIVERINE	Area	0.007 ACRE	DELINEATE	40.017828 -120.10485600
D200-3	CALIFORNIA	R4UB	RIVERINE	Area	0.003 ACRE	DELINEATE	41.535269 -120.46417600
D200-4	CALIFORNIA	R5	RIVERINE	Area	0.001 ACRE	DELINEATE	41.071339 -120.47134300
D200-5a	CALIFORNIA	<Null>	RIVERINE	Area	0.001 ACRE	DELINEATE	41.020544 -120.48762400
D200-5b	CALIFORNIA	R5UB	RIVERINE	Area	0.001 ACRE	DELINEATE	41.020307 -120.48774500
D200-6	CALIFORNIA	R4SB	RIVERINE	Area	0.008 ACRE	DELINEATE	40.645459 -120.25787600
D200-6bx	CALIFORNIA	R4SB	RIVERINE	Area	0.011 ACRE	DELINEATE	40.644646 -120.25811900
D200-7	CALIFORNIA	R4SB	RIVERINE	Area	0.082 ACRE	DELINEATE	40.39465 -120.29890400
D200-8	CALIFORNIA	R4SB	RIVERINE	Area	0.006 ACRE	DELINEATE	40.275197 -120.48271900
D200-8bx	CALIFORNIA	R4SB	RIVERINE	Area	0.006 ACRE	DELINEATE	40.27507 -120.48312200
D201-10	CALIFORNIA	R4UB	RIVERINE	Area	0.003 ACRE	DELINEATE	40.093656 -120.17775800
D201-10bx	CALIFORNIA	R5	RIVERINE	Area	0.012 ACRE	DELINEATE	40.093338 -120.17780400
D201-3	CALIFORNIA	R4SB	RIVERINE	Area	0.004 ACRE	DELINEATE	41.535143 -120.46432500
D201-3bx	CALIFORNIA	R4SB	RIVERINE	Area	0.001 ACRE	DELINEATE	41.535355 -120.46459100
D201-4	CALIFORNIA	R4UB	RIVERINE	Area	0.004 ACRE	DELINEATE	41.07321 -120.47035900
D201-4bx	CALIFORNIA	R5	RIVERINE	Area	0.004 ACRE	DELINEATE	41.073384 -120.47078200
D201-7	CALIFORNIA	R4SB	RIVERINE	Area	0.012 ACRE	DELINEATE	40.432848 -120.28086500
D201-7bx	CALIFORNIA	R4SB	RIVERINE	Area	0.014 ACRE	DELINEATE	40.432696 -120.28179200
D201-8	CALIFORNIA	R4SB	RIVERINE	Area	0.001 ACRE	DELINEATE	40.378082 -120.39332100
D201-8bx	CALIFORNIA	R4SB	RIVERINE	Area	0.007 ACRE	DELINEATE	40.378264 -120.39341300
D20-1x	CALIFORNIA	R3UB	RIVERINE	Area	0.029 ACRE	DELINEATE	41.884148 -120.34336900
D202-10	CALIFORNIA	R4UB	RIVERINE	Area	0.003 ACRE	DELINEATE	40.161806 -120.33640700
D202-3	CALIFORNIA	R4UB	RIVERINE	Area	0.015 ACRE	DELINEATE	41.540339 -120.45910000
D202-3bx	CALIFORNIA	R5	RIVERINE	Area	0.003 ACRE	DELINEATE	41.540516 -120.45975000
D202-4	CALIFORNIA	R4UB	RIVERINE	Area	0.005 ACRE	DELINEATE	41.084925 -120.47045700
D202-7	CALIFORNIA	R4SB	RIVERINE	Area	0.012 ACRE	DELINEATE	40.431244 -120.28121100

D202-8	CALIFORNIA	R4UB	RIVERINE	Area	0.001 ACRE	DELINEATE	40.275846 -120.48324100
D202-8bx	CALIFORNIA	R4SB	RIVERINE	Area	0.018 ACRE	DELINEATE	40.275514 -120.48354200
D20-2x	CALIFORNIA	R4SB	RIVERINE	Area	0.001 ACRE	DELINEATE	41.678747 -120.38099200
D203-10	CALIFORNIA	R4SB	RIVERINE	Area	0.009 ACRE	DELINEATE	40.162641 -120.33965900
D203-10bx	CALIFORNIA	R4SB	RIVERINE	Area	0.004 ACRE	DELINEATE	40.162321 -120.33984500
D203-3	CALIFORNIA	R4UB	RIVERINE	Area	0.001 ACRE	DELINEATE	41.540272 -120.45946600
D203-4	CALIFORNIA	R4UB	RIVERINE	Area	0.008 ACRE	DELINEATE	41.085139 -120.47053200
D203-7	CALIFORNIA	R4UB	RIVERINE	Area	0.013 ACRE	DELINEATE	40.434855 -120.28042000
D204-3	CALIFORNIA	<Null>	RIVERINE	Area	0.079 ACRE	DELINEATE	41.521204 -120.47690900
D204-3bx	CALIFORNIA	R3UB	RIVERINE	Area	0.02 ACRE	DELINEATE	41.521598 -120.47701100
D204-4	CALIFORNIA	R4SB	RIVERINE	Area	0.01 ACRE	DELINEATE	41.085681 -120.47053900
D204-7	CALIFORNIA	R4UB	RIVERINE	Area	0.004 ACRE	DELINEATE	40.437201 -120.28016000
D205-3	CALIFORNIA	R2UB	RIVERINE	Area	0.052 ACRE	DELINEATE	41.515942 -120.48242800
D205-3bx	CALIFORNIA	R3UB	RIVERINE	Area	0.057 ACRE	DELINEATE	41.516139 -120.48260500
D205-4	CALIFORNIA	R4UB	RIVERINE	Area	0.004 ACRE	DELINEATE	41.113512 -120.48388800
D205-4bx	CALIFORNIA	R4SB	RIVERINE	Area	0.003 ACRE	DELINEATE	41.113312 -120.48428400
D205-7	CALIFORNIA	R4UB	RIVERINE	Area	0.05 ACRE	DELINEATE	40.441828 -120.27901500
D206-4	CALIFORNIA	R4SB	RIVERINE	Area	0.004 ACRE	DELINEATE	41.118359 -120.48761200
D206-4a	CALIFORNIA	R4SB	RIVERINE	Area	0.007 ACRE	DELINEATE	41.113612 -120.48399900
D207-4	CALIFORNIA	R4SB	RIVERINE	Area	0.005 ACRE	DELINEATE	41.116726 -120.48623000
D208-4	CALIFORNIA	R5	RIVERINE	Area	0.002 ACRE	DELINEATE	41.116726 -120.48619700
D209-4	CALIFORNIA	R4SB	RIVERINE	Area	0.002 ACRE	DELINEATE	41.122704 -120.49155500
D209-4bx	CALIFORNIA	R5	RIVERINE	Area	0.003 ACRE	DELINEATE	41.122536 -120.49187500
D210-4	CALIFORNIA	R5	RIVERINE	Area	0.001 ACRE	DELINEATE	41.122444 -120.49129200
D210-4bx	CALIFORNIA	R5	RIVERINE	Area	0.004 ACRE	DELINEATE	41.122259 -120.49164800
D2-10x	CALIFORNIA	R5	RIVERINE	Area	0.002 ACRE	DELINEATE	40.164274 -120.34670500
D211-4	CALIFORNIA	R4SB	RIVERINE	Area	0.001 ACRE	DELINEATE	41.128672 -120.49967000
D21-1x	CALIFORNIA	R3UB	RIVERINE	Area	0.095 ACRE	DELINEATE	41.877524 -120.34531300
D212-4	CALIFORNIA	R4SB	RIVERINE	Area	0.006 ACRE	DELINEATE	41.147246 -120.51012500
D212-4bx	CALIFORNIA	R4SB	RIVERINE	Area	0.005 ACRE	DELINEATE	41.147009 -120.51067100
D213-4	CALIFORNIA	R2AB	RIVERINE	Area	0.003 ACRE	DELINEATE	41.148083 -120.50990400
D213-4bx	CALIFORNIA	R2AB	RIVERINE	Area	0.011 ACRE	DELINEATE	41.147659 -120.51054600
D213-4cx	CALIFORNIA	R2AB	RIVERINE	Area	0.002 ACRE	DELINEATE	41.14776 -120.51057500
D21-3X	CALIFORNIA	<Null>	RIVERINE	Area	0.036 ACRE	DELINEATE	41.476827 -120.54376100
D22-1x	CALIFORNIA	L1UB	LACUSTRINF	Area	0.007 ACRE	DELINEATE	41.876069 -120.34570600
D22-3x	CALIFORNIA	L1UB	LACUSTRINF	Area	6.191 ACRE	DELINEATE	41.449508 -120.54792100
D23-3x	CALIFORNIA	L1UB	LACUSTRINF	Area	1.738 ACRE	DELINEATE	41.444709 -120.54725900
D24-1X	CALIFORNIA	R4SB	RIVERINE	Area	0.005 ACRE	DELINEATE	41.865945 -120.34981800
D24-2x	CALIFORNIA	R5UB	RIVERINE	Area	0.003 ACRE	DELINEATE	41.669744 -120.38570200
D24-3x	CALIFORNIA	L1UB	LACUSTRINF	Area	1.458 ACRE	DELINEATE	41.455968 -120.54871500
D25-1x	CALIFORNIA	R4SB	RIVERINE	Area	0.013 ACRE	DELINEATE	41.853727 -120.35653100
D25-2x	CALIFORNIA	R4SB	RIVERINE	Area	0.055 ACRE	DELINEATE	41.664016 -120.38879100
D26-1x	CALIFORNIA	R4SB	RIVERINE	Area	0.001 ACRE	DELINEATE	41.837813 -120.35888600
D26-2x	CALIFORNIA	R5UB	RIVERINE	Area	0.001 ACRE	DELINEATE	41.65997 -120.39090300
D2-7	CALIFORNIA	R4SB	RIVERINE	Area	0.055 ACRE	DELINEATE	40.617254 -120.24484600
D27-1x	CALIFORNIA	R4SB	RIVERINE	Area	0.005 ACRE	DELINEATE	41.828043 -120.35382800
D27-2x	CALIFORNIA	R4SB	RIVERINE	Area	0.004 ACRE	DELINEATE	41.657183 -120.39233700
D28-2bx	CALIFORNIA	R3UB	RIVERINE	Area	1.668 ACRE	DELINEATE	41.583098 -120.43462600
D28-2x	CALIFORNIA	R3UB	RIVERINE	Area	1.207 ACRE	DELINEATE	41.596398 -120.42328100
D2-8X	CALIFORNIA	R4SB	RIVERINE	Area	0.009 ACRE	DELINEATE	40.263792 -120.47248500
D29-2x	CALIFORNIA	R3UB	RIVERINE	Area	0.032 ACRE	DELINEATE	41.593826 -120.42327500

D300-4	CALIFORNIA	R4UB	RIVERINE	Area	0.012 ACRE	DELINEATE	41.198642 -120.50668600
D300-4bx	CALIFORNIA	R5SB	RIVERINE	Area	0.003 ACRE	DELINEATE	41.198328 -120.50715000
D300-7	CALIFORNIA	R4SB	RIVERINE	Area	0.044 ACRE	DELINEATE	40.566848 -120.25405200
D300-7bx	CALIFORNIA	R4SB	RIVERINE	Area	0.016 ACRE	DELINEATE	40.565966 -120.25499300
D301-4	CALIFORNIA	R4UB	RIVERINE	Area	0.002 ACRE	DELINEATE	41.205178 -120.50542500
D301-7	CALIFORNIA	R4SB	RIVERINE	Area	0.007 ACRE	DELINEATE	40.566448 -120.25399700
D3-10x	CALIFORNIA	R5	RIVERINE	Area	0.144 ACRE	DELINEATE	40.030543 -120.10810300
D3-1x	CALIFORNIA	R4SB	RIVERINE	Area	0.01 ACRE	DELINEATE	41.969292 -120.30386000
D3-2bx	CALIFORNIA	R4SB	RIVERINE	Area	0.003 ACRE	DELINEATE	41.626949 -120.40839000
D3-2x	CALIFORNIA	R4SB	RIVERINE	Area	0.015 ACRE	DELINEATE	41.74813 -120.37578400
D3-6bx	CALIFORNIA	R5	RIVERINE	Area	0.002 ACRE	DELINEATE	40.723112 -120.30755600
D3-7	CALIFORNIA	R3UB	RIVERINE	Area	0.104 ACRE	DELINEATE	40.619168 -120.24566200
D4-1x	CALIFORNIA	R4SB	RIVERINE	Area	0.026 ACRE	DELINEATE	41.966681 -120.30496100
D4-2bx	CALIFORNIA	R4SB	RIVERINE	Area	0.014 ACRE	DELINEATE	41.637184 -120.40288900
D4-7	CALIFORNIA	R3SB	RIVERINE	Area	0.732 ACRE	DELINEATE	40.62289 -120.24814600
D500-3bx	CALIFORNIA	R3UB	RIVERINE	Area	0.147 ACRE	DELINEATE	41.413813 -120.54488300
D500-3x	CALIFORNIA	R3UB	RIVERINE	Area	0.396 ACRE	DELINEATE	41.414693 -120.54363800
D500-5	CALIFORNIA	R2AB	RIVERINE	Area	0.015 ACRE	DELINEATE	41.053059 -120.47431700
D500-5bx	CALIFORNIA	R2AB	RIVERINE	Area	0.027 ACRE	DELINEATE	41.053062 -120.47481900
D50-1bx	CALIFORNIA	R4SB	RIVERINE	Area	0.009 ACRE	DELINEATE	41.991513 -120.29827700
D50-2	CALIFORNIA	R4SB	RIVERINE	Area	0.001 ACRE	DELINEATE	41.665421 -120.38760000
D50-2bx	CALIFORNIA	R4SB	RIVERINE	Area	0.003 ACRE	DELINEATE	41.665532 -120.38796000
D50-6	CALIFORNIA	R4SB	RIVERINE	Area	0.11 ACRE	DELINEATE	40.668765 -120.28289000
D50-6xb	CALIFORNIA	R4SB	RIVERINE	Area	0.026 ACRE	DELINEATE	40.66847 -120.28369800
D50-7x	CALIFORNIA	R4SB	RIVERINE	Area	0.054 ACRE	DELINEATE	40.617391 -120.24580700
D51-1	CALIFORNIA	R4SB	RIVERINE	Area	0.003 ACRE	DELINEATE	41.981086 -120.29823400
D51-1bx	CALIFORNIA	R4SB	RIVERINE	Area	0.084 ACRE	DELINEATE	41.980844 -120.29867300
D51-2	CALIFORNIA	<Null>	RIVERINE	Area	0.002 ACRE	DELINEATE	41.671396 -120.38447300
D51-2bx	CALIFORNIA	R3UB	RIVERINE	Area	0.003 ACRE	DELINEATE	41.671247 -120.38491100
D51-2cx	CALIFORNIA	R5UB	RIVERINE	Area	0.038 ACRE	DELINEATE	41.670453 -120.38539400
D51-5bx	CALIFORNIA	R3SB	RIVERINE	Area	0.025 ACRE	DELINEATE	40.933155 -120.51150100
D51-5x	CALIFORNIA	R3SB	RIVERINE	Area	0.444 ACRE	DELINEATE	40.934741 -120.51152800
D51-7bx	CALIFORNIA	R5	RIVERINE	Area	0.009 ACRE	DELINEATE	40.59861 -120.24790800
D51-7x	CALIFORNIA	R5	RIVERINE	Area	0.006 ACRE	DELINEATE	40.599376 -120.24697800
D5-1x	CALIFORNIA	R3UB	RIVERINE	Area	0.01 ACRE	DELINEATE	41.965467 -120.30560000
D52-1	CALIFORNIA	RFT	RIVERINE	Area	0.002 ACRE	DELINEATE	41.902878 -120.33400900
D52-2	CALIFORNIA	R4UB	RIVERINE	Area	0.001 ACRE	DELINEATE	41.675236 -120.38240000
D52-2bx	CALIFORNIA	R4SB	RIVERINE	Area	0.002 ACRE	DELINEATE	41.675238 -120.38284300
D5-2bx	CALIFORNIA	R4SB	RIVERINE	Area	0.008 ACRE	DELINEATE	41.747947 -120.37543500
D5-2x	CALIFORNIA	R4SB	RIVERINE	Area	0.007 ACRE	DELINEATE	41.747911 -120.37577900
D53-1	CALIFORNIA	R5UB	RIVERINE	Area	0.009 ACRE	DELINEATE	41.895753 -120.33769100
D53-1bx	CALIFORNIA	R5UB	RIVERINE	Area	0.016 ACRE	DELINEATE	41.895665 -120.33733500
D53-2	CALIFORNIA	R3UB	RIVERINE	Area	0.001 ACRE	DELINEATE	41.681156 -120.37928900
D54-2	CALIFORNIA	R4SB	RIVERINE	Area	0.001 ACRE	DELINEATE	41.757246 -120.37525700
D54-2bx	CALIFORNIA	R5	RIVERINE	Area	0.001 ACRE	DELINEATE	41.757162 -120.37566500
D600-2x	CALIFORNIA	R4SB	RIVERINE	Area	0.001 ACRE	DELINEATE	41.748126 -120.37541500
D7-1x	CALIFORNIA	R4SB	RIVERINE	Area	0.001 ACRE	DELINEATE	41.96109 -120.30752100
D800-7	CALIFORNIA	R4SB	RIVERINE	Area	0.022 ACRE	DELINEATE	40.54252 -120.25932700
D800-7bx	CALIFORNIA	R4SB	RIVERINE	Area	0.051 ACRE	DELINEATE	40.542479 -120.26025100
D9-2bx	CALIFORNIA	R5UB	RIVERINE	Area	0.001 ACRE	DELINEATE	41.738404 -120.37581300
D9-2x	CALIFORNIA	R5UB	RIVERINE	Area	0.002 ACRE	DELINEATE	41.738539 -120.37586800



W001-9	CALIFORNIA	PEM	DEPRESS	Area	0.021 ACRE	DELINEATE	40.193731 -120.40184200
W001a-2	CALIFORNIA	PSS	DEPRESS	Area	0.265 ACRE	DELINEATE	41.589985 -120.42719900
W001b-2	CALIFORNIA	PSS	DEPRESS	Area	0.023 ACRE	DELINEATE	41.591077 -120.42453600
W002-2	CALIFORNIA	PSS	DEPRESS	Area	0.191 ACRE	DELINEATE	41.593737 -120.42278200
W003a-2	CALIFORNIA	PEM	DEPRESS	Area	0.131 ACRE	DELINEATE	41.59715 -120.42269400
W003b-2	CALIFORNIA	PEM	DEPRESS	Area	0.043 ACRE	DELINEATE	41.599225 -120.42267000
W004-2	CALIFORNIA	PEM	DEPRESS	Area	0.061 ACRE	DELINEATE	41.602451 -120.42179500
W005a-2	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.054 ACRE	DELINEATE	41.613792 -120.41663200
W005b-2	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.255 ACRE	DELINEATE	41.615986 -120.41413000
W005c-2	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.059 ACRE	DELINEATE	41.61804 -120.41269500
W006a-2	CALIFORNIA	PEM	DEPRESS	Area	0.004 ACRE	DELINEATE	41.619274 -120.41194100
W006b-2	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.233 ACRE	DELINEATE	41.620501 -120.41130900
W007a-2	CALIFORNIA	PEM	DEPRESS	Area	0.016 ACRE	DELINEATE	41.643735 -120.39903900
W007b-2	CALIFORNIA	PEM	DEPRESS	Area	0.009 ACRE	DELINEATE	41.643942 -120.39936500
W008a-2	CALIFORNIA	PEM	DEPRESS	Area	0.096 ACRE	DELINEATE	41.645339 -120.39819600
W008b-2	CALIFORNIA	PEM	DEPRESS	Area	0.012 ACRE	DELINEATE	41.646192 -120.39816100
W009-2	CALIFORNIA	PEM	DEPRESS	Area	0.021 ACRE	DELINEATE	41.64642 -120.39763000
W010a-2	CALIFORNIA	PEM	DEPRESS	Area	0.166 ACRE	DELINEATE	41.647514 -120.39705800
W010b-2	CALIFORNIA	PEM	DEPRESS	Area	0.118 ACRE	DELINEATE	41.648276 -120.39705000
W01-1	CALIFORNIA	PEM	DEPRESS	Area	0.068 ACRE	DELINEATE	41.790125 -120.36928200
W01-10	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.961 ACRE	DELINEATE	40.114747 -120.22573600
W01-10x	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.117 ACRE	DELINEATE	40.168634 -120.36454700
W01-11	CALIFORNIA	PEM	DEPRESS	Area	0.564 ACRE	DELINEATE	39.921556 -120.01828000
W01-11x	CALIFORNIA	PSS	DEPRESS	Area	0.047 ACRE	DELINEATE	39.951362 -120.03228800
W011-2	CALIFORNIA	PEM	DEPRESS	Area	0.011 ACRE	DELINEATE	41.64959 -120.39595400
W012-2	CALIFORNIA	PEM	DEPRESS	Area	0.007 ACRE	DELINEATE	41.65066 -120.39540500
W01-3	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.011 ACRE	DELINEATE	41.481409 -120.54229200
W013-2	CALIFORNIA	PEM	DEPRESS	Area	0.007 ACRE	DELINEATE	41.653454 -120.39391900
W01-4	CALIFORNIA	PEM	DEPRESS	Area	0.313 ACRE	DELINEATE	41.234071 -120.50386900
W014-2	CALIFORNIA	PEM	DEPRESS	Area	0.019 ACRE	DELINEATE	41.652997 -120.39416800
W015-2	CALIFORNIA	PEM	DEPRESS	Area	0.187 ACRE	DELINEATE	41.650062 -120.39613000
W016-2	CALIFORNIA	PEM	DEPRESS	Area	0.193 ACRE	DELINEATE	41.652134 -120.39503100
W01-6x	CALIFORNIA	PEM	DEPRESS	Area	0.416 ACRE	DELINEATE	40.753212 -120.32965900
W01-7	CALIFORNIA	PEM	DEPRESS	Area	32.441 ACRE	DELINEATE	40.477496 -120.27391800
W017-2	CALIFORNIA	PEM	DEPRESS	Area	0.649 ACRE	DELINEATE	41.655208 -120.39340000
W018-2	CALIFORNIA	PEM	DEPRESS	Area	0.435 ACRE	DELINEATE	41.657924 -120.39196400
W019-2	CALIFORNIA	PEM	DEPRESS	Area	0.009 ACRE	DELINEATE	41.616271 -120.41420400
W01a-8	CALIFORNIA	PFO	DEPRESS	Area	0.204 ACRE	DELINEATE	40.274376 -120.48189500
W01b-8	CALIFORNIA	PFO	DEPRESS	Area	0.064 ACRE	DELINEATE	40.275116 -120.48260500
W020a-2	CALIFORNIA	PEM	DEPRESS	Area	0.077 ACRE	DELINEATE	41.61483200 -120.41585300
W020b-2	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.201 ACRE	DELINEATE	41.61423300 -120.41660500
W02-1	CALIFORNIA	PEM	DEPRESS	Area	0.04 ACRE	DELINEATE	41.792827 -120.36815000
W02-10	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.408 ACRE	DELINEATE	40.117152 -120.23198700
W02-10x	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.055 ACRE	DELINEATE	40.168358 -120.36246700
W02-11	CALIFORNIA	PEM	DEPRESS	Area	0.044 ACRE	DELINEATE	39.928456 -120.01981000
W02-11x	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.03 ACRE	DELINEATE	39.921686 -120.01899300
W02-3	CALIFORNIA	PEM	DEPRESS	Area	0.208 ACRE	DELINEATE	41.477649 -120.54240700
W02-4	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.142 ACRE	DELINEATE	41.23651100 -120.50394800
W02-6x	CALIFORNIA	PEM	DEPRESS	Area	0.96 ACRE	DELINEATE	40.74273600 -120.32212600
W02-7	CALIFORNIA	PEM	DEPRESS	Area	30.749 ACRE	DELINEATE	40.47920400 -120.27443400
W03-1	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.541 ACRE	DELINEATE	41.79436600 -120.36749800

W03-10	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.401 ACRE	DELINEATE	40.11853600 -120.23517400
W03-10x	CALIFORNIA	PEM	DEPRESS	Area	0.032 ACRE	DELINEATE	40.16570800 -120.35150000
W03-11	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.211 ACRE	DELINEATE	39.90822800 -120.01236600
W03-11x	CALIFORNIA	PEM	DEPRESS	Area	0.031 ACRE	DELINEATE	39.90647800 -120.01314700
W03-3	CALIFORNIA	PEM	DEPRESS	Area	0.07 ACRE	DELINEATE	41.47637500 -120.54383900
W03-4a	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.154 ACRE	DELINEATE	41.23980900 -120.50393600
W03-4b	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.317 ACRE	DELINEATE	41.24038000 -120.50395400
W03-4c	CALIFORNIA	<Null>	DEPRESS	Area	0.615 ACRE	DELINEATE	41.24232400 -120.50397600
W03-4d	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.429 ACRE	DELINEATE	41.24359100 -120.50397300
W03-6x	CALIFORNIA	PEM	DEPRESS	Area	0.105 ACRE	DELINEATE	40.71988600 -120.30641800
W04-10	CALIFORNIA	PEM	DEPRESS	Area	0.039 ACRE	DELINEATE	40.14116500 -120.27876500
W04-11x	CALIFORNIA	PEM	DEPRESS	Area	0.706 ACRE	DELINEATE	39.89843000 -120.01536400
W04-1a	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.47 ACRE	DELINEATE	41.93858600 -120.31755100
W04-1b	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.252 ACRE	DELINEATE	41.93622100 -120.31867000
W04-1c	CALIFORNIA	PEM/PSS	DEPRESS	Area	1.514 ACRE	DELINEATE	41.93278200 -120.32025700
W04-3	CALIFORNIA	PEM	DEPRESS	Area	0.319 ACRE	DELINEATE	41.47526000 -120.54430500
W04-6x	CALIFORNIA	PEM	DEPRESS	Area	0.038 ACRE	DELINEATE	40.71814500 -120.30565000
W05-1	CALIFORNIA	PEM	DEPRESS	Area	2.463 ACRE	DELINEATE	41.93292400 -120.32052500
W05-10	CALIFORNIA	PSS	DEPRESS	Area	0.006 ACRE	DELINEATE	40.16564100 -120.35038600
W05-10x	CALIFORNIA	PEM	DEPRESS	Area	0.669 ACRE	DELINEATE	40.11468800 -120.22669200
W05-3	CALIFORNIA	PEM	DEPRESS	Area	0.03 ACRE	DELINEATE	41.47402400 -120.54472900
W05-3x	CALIFORNIA	PEM	DEPRESS	Area	0.085 ACRE	DELINEATE	41.52275800 -120.47633000
W05-6x	CALIFORNIA	PEM	DEPRESS	Area	0.038 ACRE	DELINEATE	40.68185400 -120.28941900
W06-10	CALIFORNIA	PSS	DEPRESS	Area	0.002 ACRE	DELINEATE	40.16603300 -120.35167200
W06-11x	CALIFORNIA	PEM	DEPRESS	Area	0.063 ACRE	DELINEATE	39.86426200 -120.04034800
W06-3	CALIFORNIA	PEM	DEPRESS	Area	0.003 ACRE	DELINEATE	41.47373600 -120.54479100
W06-3x	CALIFORNIA	PSS	DEPRESS	Area	0.231 ACRE	DELINEATE	41.51881900 -120.47957500
W06-6x	CALIFORNIA	PEM	DEPRESS	Area	0.938 ACRE	DELINEATE	40.64611100 -120.25998500
W07-3	CALIFORNIA	PEM	DEPRESS	Area	0.017 ACRE	DELINEATE	41.47324300 -120.54507600
W07-3x	CALIFORNIA	PEM	DEPRESS	Area	0.023 ACRE	DELINEATE	41.51650800 -120.48204000
W08-1	CALIFORNIA	PEM	DEPRESS	Area	0.126 ACRE	DELINEATE	41.96616300 -120.30488900
W08-3	CALIFORNIA	PEM	DEPRESS	Area	0.106 ACRE	DELINEATE	41.47247700 -120.54536700
W08-3x	CALIFORNIA	PEM	DEPRESS	Area	0.011 ACRE	DELINEATE	41.51626500 -120.48247100
W09-10x	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.114 ACRE	DELINEATE	40.00137800 -120.08661200
W09-3x	CALIFORNIA	PSS	DEPRESS	Area	0.07 ACRE	DELINEATE	41.51637100 -120.48225700
W100-1	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.1 ACRE	DELINEATE	41.81342300 -120.35445500
W100-10	CALIFORNIA	PSS	DEPRESS	Area	0.419 ACRE	DELINEATE	40.03410000 -120.10951100
W100-2	CALIFORNIA	PEM	DEPRESS	Area	0.036 ACRE	DELINEATE	41.69143800 -120.37512900
W100-3	CALIFORNIA	PEM	DEPRESS	Area	7.305 ACRE	DELINEATE	41.35790200 -120.52490000
W100-8	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.019 ACRE	DELINEATE	40.36610700 -120.40336900
W100-9x	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.175 ACRE	DELINEATE	40.20768300 -120.41777800
W10-10x	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.471 ACRE	DELINEATE	40.00085300 -120.08583000
W101-1	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.532 ACRE	DELINEATE	41.82822800 -120.35335200
W101-2	CALIFORNIA	PEM	DEPRESS	Area	0.062 ACRE	DELINEATE	41.69280200 -120.37512700
W101-3	CALIFORNIA	PEM	DEPRESS	Area	2.589 ACRE	DELINEATE	41.35786300 -120.52561700
W101-8	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.069 ACRE	DELINEATE	40.37630300 -120.39823000
W101a-10	CALIFORNIA	PSS	DEPRESS	Area	0.101 ACRE	DELINEATE	40.05159600 -120.12597700
W101b-10	CALIFORNIA	PSS	DEPRESS	Area	0.244 ACRE	DELINEATE	40.05229700 -120.12669200
W102-1	CALIFORNIA	PEM	DEPRESS	Area	0.126 ACRE	DELINEATE	41.83792900 -120.35801000
W102-2	CALIFORNIA	PEM	DEPRESS	Area	0.015 ACRE	DELINEATE	41.69662200 -120.37510000
W102-8a	CALIFORNIA	PSS	DEPRESS	Area	0.007 ACRE	DELINEATE	40.37762700 -120.39498000

W102-8b	CALIFORNIA	PSS	DEPRESS	Area	0.017 ACRE	DELINEATE	40.37754500 -120.39527000
W102-8cx	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.068 ACRE	DELINEATE	40.37772400 -120.39532700
W102-8dx	CALIFORNIA	PSS	DEPRESS	Area	0.023 ACRE	DELINEATE	40.37780900 -120.39503900
W102b-10	CALIFORNIA	PSS	DEPRESS	Area	0.173 ACRE	DELINEATE	40.07337800 -120.14661000
W10-2x	CALIFORNIA	PEM	DEPRESS	Area	0.012 ACRE	DELINEATE	41.62058400 -120.41162600
W10-3	CALIFORNIA	PEM	DEPRESS	Area	0.36 ACRE	DELINEATE	41.47097300 -120.54603400
W103-1	CALIFORNIA	<Null>	DEPRESS	Area	0.153 ACRE	DELINEATE	41.84956300 -120.35796400
W103-10	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.887 ACRE	DELINEATE	39.96047600 -120.04145200
W103-2	CALIFORNIA	PEM	DEPRESS	Area	0.122 ACRE	DELINEATE	41.69775100 -120.37511000
W103-8	CALIFORNIA	PEM	DEPRESS	Area	0.05 ACRE	DELINEATE	40.33673300 -120.42274500
W104-10	CALIFORNIA	PEM/PSS	DEPRESS	Area	3.005 ACRE	DELINEATE	39.97638600 -120.05861200
W104-2	CALIFORNIA	PEM	DEPRESS	Area	0.661 ACRE	DELINEATE	41.70056000 -120.37510700
W104-8	CALIFORNIA	PEM	DEPRESS	Area	0.101 ACRE	DELINEATE	40.32460500 -120.42262600
W105-10	CALIFORNIA	PEM	DEPRESS	Area	0.054 ACRE	DELINEATE	39.99481400 -120.07846300
W105-10b	CALIFORNIA	PEM	DEPRESS	Area	0.086 ACRE	DELINEATE	39.99488500 -120.07857600
W105-10c	CALIFORNIA	PEM	DEPRESS	Area	0.009 ACRE	DELINEATE	39.99512100 -120.07838800
W105-10d	CALIFORNIA	PEM	DEPRESS	Area	0.012 ACRE	DELINEATE	39.99507000 -120.07833100
W105-2	CALIFORNIA	PEM	DEPRESS	Area	0.119 ACRE	DELINEATE	41.70532700 -120.37508800
W105-8	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.219 ACRE	DELINEATE	40.28738700 -120.48092800
W106-10	CALIFORNIA	PEM/PSS	DEPRESS	Area	4.047 ACRE	DELINEATE	39.97623200 -120.05921600
W106-10b	CALIFORNIA	PEM/PSS	DEPRESS	Area	2.769 ACRE	DELINEATE	39.96953800 -120.05194300
W106-10c	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.446 ACRE	DELINEATE	39.96676500 -120.04901800
W106-10d	CALIFORNIA	PEM/PSS	DEPRESS	Area	3.41 ACRE	DELINEATE	39.96150200 -120.04331600
W106-2	CALIFORNIA	PEM	DEPRESS	Area	0.047 ACRE	DELINEATE	41.70959200 -120.37505600
W107-2	CALIFORNIA	PEM	DEPRESS	Area	0.031 ACRE	DELINEATE	41.72404000 -120.37503000
W107A-2	CALIFORNIA	PEM	DEPRESS	Area	0.001 ACRE	DELINEATE	41.71378400 -120.37503300
W108-2	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.504 ACRE	DELINEATE	41.72886700 -120.37499600
W109-2	CALIFORNIA	PEM	DEPRESS	Area	0.036 ACRE	DELINEATE	41.73047100 -120.37502400
W110-2	CALIFORNIA	PEM	DEPRESS	Area	0.279 ACRE	DELINEATE	41.73250500 -120.37505000
W11-10x	CALIFORNIA	PEM	DEPRESS	Area	0.211 ACRE	DELINEATE	39.99988700 -120.08475800
W111-2	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.064 ACRE	DELINEATE	41.73374100 -120.37513000
W112-2	CALIFORNIA	PEM	DEPRESS	Area	0.024 ACRE	DELINEATE	41.73682400 -120.37539100
W11-2x	CALIFORNIA	PEM	DEPRESS	Area	0.113 ACRE	DELINEATE	41.61987200 -120.41204600
W11-3	CALIFORNIA	PEM	DEPRESS	Area	2.707 ACRE	DELINEATE	41.46636600 -120.54802100
W113-2	CALIFORNIA	PEM	DEPRESS	Area	0.059 ACRE	DELINEATE	41.73613800 -120.37533000
W11-3x	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.233 ACRE	DELINEATE	41.47754800 -120.54324900
W114-2	CALIFORNIA	PEM	DEPRESS	Area	0.316 ACRE	DELINEATE	41.73915900 -120.37556300
W115-2	CALIFORNIA	PEM	DEPRESS	Area	0.026 ACRE	DELINEATE	41.74344800 -120.37559200
W116-2	CALIFORNIA	PSS	DEPRESS	Area	0.511 ACRE	DELINEATE	41.74658500 -120.37548900
W117-2	CALIFORNIA	PEM	DEPRESS	Area	0.125 ACRE	DELINEATE	41.74895400 -120.37540200
W118-2a	CALIFORNIA	PEM	DEPRESS	Area	0.232 ACRE	DELINEATE	41.57533800 -120.43550100
W118-2b	CALIFORNIA	PEM	DEPRESS	Area	0.194 ACRE	DELINEATE	41.57606500 -120.43545600
W1-1x	CALIFORNIA	PSS	DEPRESS	Area	0.015 ACRE	DELINEATE	41.97255400 -120.30225600
W120-2a	CALIFORNIA	PEM	DEPRESS	Area	0.027 ACRE	DELINEATE	41.57786300 -120.43535100
W120-2b	CALIFORNIA	PEM	DEPRESS	Area	0.042 ACRE	DELINEATE	41.57804800 -120.43535100
W12-10x	CALIFORNIA	PSS	DEPRESS	Area	0.105 ACRE	DELINEATE	39.99616700 -120.08072000
W122-2	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.194 ACRE	DELINEATE	41.58368500 -120.43371600
W12-2x	CALIFORNIA	PSS	DEPRESS	Area	0.221 ACRE	DELINEATE	41.60155000 -120.42303200
W12-3	CALIFORNIA	PEM	DEPRESS	Area	0.172 ACRE	DELINEATE	41.46226200 -120.54996300
W12-3x	CALIFORNIA	PSS	DEPRESS	Area	0.031 ACRE	DELINEATE	41.47684300 -120.54371000
W1-2x	CALIFORNIA	PEM	DEPRESS	Area	0.112 ACRE	DELINEATE	41.74842900 -120.37577600

W13-2x	CALIFORNIA	PSS	DEPRESS	Area	0.088 ACRE	DELINEATE	41.59397300 -120.42331900
W13-3	CALIFORNIA	PEM	DEPRESS	Area	0.462 ACRE	DELINEATE	41.46131500 -120.55024000
W14-03	CALIFORNIA	PEM	DEPRESS	Area	0.189 ACRE	DELINEATE	41.45354800 -120.55000600
W14-3x	CALIFORNIA	PEM	DEPRESS	Area	2.695 ACRE	DELINEATE	41.44964000 -120.54843600
W15-03	CALIFORNIA	PEM	DEPRESS	Area	0.113 ACRE	DELINEATE	41.45285700 -120.54993100
W15-3x	CALIFORNIA	PEM	DEPRESS	Area	18.63 ACRE	DELINEATE	41.45411400 -120.54908100
W1-5x	CALIFORNIA	PEM	DEPRESS	Area	0.011 ACRE	DELINEATE	41.05302800 -120.47482200
W16-03	CALIFORNIA	PEM	DEPRESS	Area	0.183 ACRE	DELINEATE	41.44699600 -120.54913700
W16-3x	CALIFORNIA	PEM	DEPRESS	Area	0.084 ACRE	DELINEATE	41.44384600 -120.54728900
W1-7	CALIFORNIA	PEM	DEPRESS	Area	0.506 ACRE	DELINEATE	40.59295500 -120.24807200
W17-03	CALIFORNIA	PEM	DEPRESS	Area	0.147 ACRE	DELINEATE	41.44070700 -120.54826800
W17-4x	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.007 ACRE	DELINEATE	41.24588800 -120.50458300
W18-03	CALIFORNIA	PEM	DEPRESS	Area	0.079 ACRE	DELINEATE	41.43616700 -120.54764000
W18-4x	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.008 ACRE	DELINEATE	41.24594900 -120.50457100
W19-3	CALIFORNIA	PEM	DEPRESS	Area	1.219 ACRE	DELINEATE	41.41682000 -120.54514300
W19-4x	CALIFORNIA	PEM	DEPRESS	Area	0.154 ACRE	DELINEATE	41.24268100 -120.50445700
W2	CALIFORNIA	PSS	DEPRESS	Area	0.161 ACRE	DELINEATE	40.59756700 -120.24695200
W200-10	CALIFORNIA	PSS	DEPRESS	Area	0.059 ACRE	DELINEATE	40.00880200 -120.09086300
W200-10x	CALIFORNIA	PSS	DEPRESS	Area	1.463 ACRE	DELINEATE	40.03335300 -120.10997100
W200-11x	CALIFORNIA	PEM	DEPRESS	Area	0.088 ACRE	DELINEATE	39.89369400 -120.01730100
W200-1x	CALIFORNIA	PEM/PSS	DEPRESS	Area	1.433 ACRE	DELINEATE	41.89681500 -120.33679300
W200-3	CALIFORNIA	PEM	DEPRESS	Area	0.017 ACRE	DELINEATE	41.52461700 -120.47380800
W200-4	CALIFORNIA	PEM	DEPRESS	Area	0.019 ACRE	DELINEATE	41.07892300 -120.46904100
W200-5a	CALIFORNIA	PEM	DEPRESS	Area	3.382 ACRE	DELINEATE	40.98717600 -120.49578400
W200-5b	CALIFORNIA	PEM	DEPRESS	Area	3.441 ACRE	DELINEATE	41.00576500 -120.49133900
W200-6	CALIFORNIA	PEM	DEPRESS	Area	0.018 ACRE	DELINEATE	40.74576100 -120.32334500
W201-3	CALIFORNIA	PEM	DEPRESS	Area	0.081 ACRE	DELINEATE	41.52395000 -120.47440900
W201-4	CALIFORNIA	PEM	DEPRESS	Area	0.321 ACRE	DELINEATE	41.10577500 -120.47847100
W202-3	CALIFORNIA	PEM	DEPRESS	Area	0.008 ACRE	DELINEATE	41.52337600 -120.47492200
W202-5	CALIFORNIA	PEM	DEPRESS	Area	0.297 ACRE	DELINEATE	41.03238700 -120.48363900
W202a-4	CALIFORNIA	PEM	DEPRESS	Area	0.079 ACRE	DELINEATE	41.12258100 -120.49142700
W202b-4	CALIFORNIA	PEM	DEPRESS	Area	0.018 ACRE	DELINEATE	41.12279400 -120.49168000
W20-3	CALIFORNIA	PEM	DEPRESS	Area	1.612 ACRE	DELINEATE	41.41443700 -120.54479700
W203-3	CALIFORNIA	PEM	DEPRESS	Area	0.04 ACRE	DELINEATE	41.52227600 -120.47591000
W203-4	CALIFORNIA	PEM	DEPRESS	Area	0.038 ACRE	DELINEATE	41.12547900 -120.49403200
W203-5	CALIFORNIA	PEM	DEPRESS	Area	0.26 ACRE	DELINEATE	41.03951300 -120.48072600
W20-4x	CALIFORNIA	PEM	DEPRESS	Area	0.242 ACRE	DELINEATE	41.24199300 -120.50450400
W205-3	CALIFORNIA	PEM	DEPRESS	Area	0.017 ACRE	DELINEATE	41.51600700 -120.48219100
W205-4-A	CALIFORNIA	PEM	DEPRESS	Area	0.01 ACRE	DELINEATE	41.12915700 -120.50040200
W205-4-B	CALIFORNIA	PEM	DEPRESS	Area	0.179 ACRE	DELINEATE	41.13009000 -120.50141800
W205-4-C	CALIFORNIA	PEM	DEPRESS	Area	0.125 ACRE	DELINEATE	41.13173200 -120.50267700
W205-4-D	CALIFORNIA	PEM	DEPRESS	Area	0.039 ACRE	DELINEATE	41.14558000 -120.51030000
W206-3	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.177 ACRE	DELINEATE	41.51529100 -120.48350200
W206-3-B	CALIFORNIA	PEM	DEPRESS	Area	0.003 ACRE	DELINEATE	41.50014300 -120.52984300
W206-4	CALIFORNIA	PEM	DEPRESS	Area	0.025 ACRE	DELINEATE	41.13136600 -120.50234100
W207-3	CALIFORNIA	PEM	DEPRESS	Area	0.025 ACRE	DELINEATE	41.50066000 -120.52824600
W207-4	CALIFORNIA	PEM	DEPRESS	Area	0.026 ACRE	DELINEATE	41.14809400 -120.50990000
W21-3	CALIFORNIA	PEM	DEPRESS	Area	4.187 ACRE	DELINEATE	41.41466400 -120.54391300
W21-4x	CALIFORNIA	PEM	DEPRESS	Area	0.527 ACRE	DELINEATE	41.24024000 -120.50441500
W2-1x	CALIFORNIA	PEM	DEPRESS	Area	0.045 ACRE	DELINEATE	41.87247100 -120.34722500
W22-3	CALIFORNIA	PEM	DEPRESS	Area	2.143 ACRE	DELINEATE	41.41727100 -120.54428900

W22-4x	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.034 ACRE	DELINEATE	41.23974400 -120.50439800
W2-2x	CALIFORNIA	PEM	DEPRESS	Area	0.021 ACRE	DELINEATE	41.74516300 -120.37587800
W23-3	CALIFORNIA	PEM	DEPRESS	Area	0.691 ACRE	DELINEATE	41.43611400 -120.54668800
W23-4x	CALIFORNIA	PFO	DEPRESS	Area	0.067 ACRE	DELINEATE	41.23824700 -120.50435900
W24-3	CALIFORNIA	PEM	DEPRESS	Area	10.761 ACRE	DELINEATE	41.46974300 -120.54580500
W24-4x	CALIFORNIA	PFO	DEPRESS	Area	0.023 ACRE	DELINEATE	41.23814700 -120.50434800
W25-4x	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.5 ACRE	DELINEATE	41.23637100 -120.50424800
W2-5x	CALIFORNIA	PEM	DEPRESS	Area	0.009 ACRE	DELINEATE	41.05309800 -120.47479500
W26-2x	CALIFORNIA	PSS	DEPRESS	Area	1.672 ACRE	DELINEATE	41.59062900 -120.42623500
W2-7	CALIFORNIA	PSS	DEPRESS	Area	1.119 ACRE	DELINEATE	40.59425400 -120.24770300
W27-4x	CALIFORNIA	PEM	DEPRESS	Area	0.078 ACRE	DELINEATE	41.23492300 -120.50423800
W2-7bx	CALIFORNIA	PEM/PSS	DEPRESS	Area	1.471 ACRE	DELINEATE	40.59070900 -120.24936800
W2-7cx	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.757 ACRE	DELINEATE	40.58610700 -120.25064100
W28-4x	CALIFORNIA	PEM	DEPRESS	Area	0.048 ACRE	DELINEATE	41.23504100 -120.50431100
W29-4x	CALIFORNIA	PFO	DEPRESS	Area	0.067 ACRE	DELINEATE	41.23432600 -120.50413300
W300-10bx	CALIFORNIA	PEM	DEPRESS	Area	0.124 ACRE	DELINEATE	39.99453600 -120.07883200
W300-10x	CALIFORNIA	PEM	DEPRESS	Area	0.046 ACRE	DELINEATE	39.99461700 -120.07894500
W30-4x	CALIFORNIA	PEM	DEPRESS	Area	0.114 ACRE	DELINEATE	41.23345200 -120.50411000
W31-4x	CALIFORNIA	PEM	DEPRESS	Area	0.029 ACRE	DELINEATE	41.23275900 -120.50409600
W3-1x	CALIFORNIA	PEM	DEPRESS	Area	0.046 ACRE	DELINEATE	41.81347300 -120.35495600
W32-4x	CALIFORNIA	PEM	DEPRESS	Area	0.004 ACRE	DELINEATE	41.23248500 -120.50407800
W3-2x	CALIFORNIA	PEM	DEPRESS	Area	0.037 ACRE	DELINEATE	41.73877800 -120.37587700
W33-4x	CALIFORNIA	PEM	DEPRESS	Area	0.008 ACRE	DELINEATE	41.22710200 -120.50410100
W34-4x	CALIFORNIA	PEM	DEPRESS	Area	0.019 ACRE	DELINEATE	41.15046300 -120.50990900
W3-4x	CALIFORNIA	PEM	DEPRESS	Area	0.194 ACRE	DELINEATE	41.03930400 -120.48123100
W35-4x	CALIFORNIA	PEM	DEPRESS	Area	0.02 ACRE	DELINEATE	41.14780700 -120.51047100
W36-4x	CALIFORNIA	PEM	DEPRESS	Area	0.021 ACRE	DELINEATE	41.14768100 -120.51053100
W3-7	CALIFORNIA	PEM	DEPRESS	Area	6.089 ACRE	DELINEATE	40.60935800 -120.24592200
W37-4x	CALIFORNIA	PEM	DEPRESS	Area	0.098 ACRE	DELINEATE	41.13875800 -120.50823200
W38-4x	CALIFORNIA	PEM	DEPRESS	Area	0.213 ACRE	DELINEATE	41.13024200 -120.50204000
W3-8x	CALIFORNIA	PEM/PSS	DEPRESS	Area	0.157 ACRE	DELINEATE	40.37645700 -120.39839800
W39-4x	CALIFORNIA	PEM	DEPRESS	Area	0.018 ACRE	DELINEATE	41.12834100 -120.49976800
W400-5x	CALIFORNIA	PEM	DEPRESS	Area	0.06 ACRE	DELINEATE	40.94471800 -120.50825600
W40-4x	CALIFORNIA	PEM	DEPRESS	Area	0.067 ACRE	DELINEATE	41.12466100 -120.49388400
W4-10x	CALIFORNIA	PEM	DEPRESS	Area	0.053 ACRE	DELINEATE	40.11815000 -120.23540000
W41-4bx	CALIFORNIA	PEM	DEPRESS	Area	0.054 ACRE	DELINEATE	41.12452300 -120.49361500
W41-4x	CALIFORNIA	PEM	DEPRESS	Area	0.028 ACRE	DELINEATE	41.12517600 -120.49424800
W42-4x	CALIFORNIA	PEM	DEPRESS	Area	0.079 ACRE	DELINEATE	41.12116700 -120.49053200
W4-2x	CALIFORNIA	PEM	DEPRESS	Area	0.021 ACRE	DELINEATE	41.73387300 -120.37544400
W43-4x	CALIFORNIA	PEM	DEPRESS	Area	0.088 ACRE	DELINEATE	41.11360400 -120.48439600
W44-4x	CALIFORNIA	PEM	DEPRESS	Area	0.653 ACRE	DELINEATE	41.10429500 -120.47784400
W45-4x	CALIFORNIA	PEM	DEPRESS	Area	0.026 ACRE	DELINEATE	41.10203300 -120.47624700
W4-5x	CALIFORNIA	PEM	DEPRESS	Area	0.013 ACRE	DELINEATE	40.94474200 -120.50763200
W4-7a	CALIFORNIA	PSS	DEPRESS	Area	2.022 ACRE	DELINEATE	40.62030900 -120.24613600
W4-7b	CALIFORNIA	PSS	DEPRESS	Area	0.079 ACRE	DELINEATE	40.62089600 -120.24605500
W4-8x	CALIFORNIA	PEM	DEPRESS	Area	0.003 ACRE	DELINEATE	40.36627700 -120.40344000
W500-5-A	CALIFORNIA	PEM	DEPRESS	Area	0.018 ACRE	DELINEATE	41.05309300 -120.47428400
W500-5-B	CALIFORNIA	PEM	DEPRESS	Area	0.014 ACRE	DELINEATE	41.05303000 -120.47433500
W50-1	CALIFORNIA	PEM	DEPRESS	Area	0.037 ACRE	DELINEATE	41.97279900 -120.30180300
W50-2	CALIFORNIA	PEM	DEPRESS	Area	0.008 ACRE	DELINEATE	41.66246400 -120.38917600
W50-5	CALIFORNIA	PEM	DEPRESS	Area	0.302 ACRE	DELINEATE	41.00179200 -120.49264800

W50-6x	CALIFORNIA	PEM	DEPRESS	Area	0.079 ACRE	DELINEATE	40.63234200 -120.25175600
W51-1	CALIFORNIA	PEM	DEPRESS	Area	0.035 ACRE	DELINEATE	41.90224800 -120.33424000
W51-2	CALIFORNIA	PEM	DEPRESS	Area	0.007 ACRE	DELINEATE	41.66293600 -120.38892200
W51-5a	CALIFORNIA	PEM	DEPRESS	Area	0.652 ACRE	DELINEATE	40.99697900 -120.49377000
W51-5b	CALIFORNIA	PEM	DEPRESS	Area	1.338 ACRE	DELINEATE	40.99467200 -120.49438700
W51-5c	CALIFORNIA	PEM	DEPRESS	Area	6.052 ACRE	DELINEATE	40.98656800 -120.49631900
W5-1x	CALIFORNIA	PEM	DEPRESS	Area	0.338 ACRE	DELINEATE	41.79482900 -120.36775400
W52-1	CALIFORNIA	<Null>	DEPRESS	Area	1.015 ACRE	DELINEATE	41.89693500 -120.33715300
W52-2	CALIFORNIA	PEM	DEPRESS	Area	0.011 ACRE	DELINEATE	41.66420700 -120.38824800
W52-5	CALIFORNIA	PEM	DEPRESS	Area	0.029 ACRE	DELINEATE	40.97653400 -120.49876400
W5-2x	CALIFORNIA	PEM	DEPRESS	Area	0.042 ACRE	DELINEATE	41.69270900 -120.37545700
W53-2	CALIFORNIA	PEM	DEPRESS	Area	0.004 ACRE	DELINEATE	41.66543700 -120.38759100
W54-2	CALIFORNIA	PEM	DEPRESS	Area	0.008 ACRE	DELINEATE	41.67139000 -120.38446300
W55-2	CALIFORNIA	PEM	DEPRESS	Area	0.212 ACRE	DELINEATE	41.68475400 -120.37741300
W5-5x	CALIFORNIA	PEM	DEPRESS	Area	0.05 ACRE	DELINEATE	40.90082000 -120.48995800
W5-6	CALIFORNIA	PEM	DEPRESS	Area	0.118 ACRE	DELINEATE	40.64244800 -120.25503100
W56-2	CALIFORNIA	PEM	DEPRESS	Area	0.002 ACRE	DELINEATE	41.68648200 -120.37650700
W57-2	CALIFORNIA	PEM	DEPRESS	Area	0.064 ACRE	DELINEATE	41.68157000 -120.37910200
W58-2	CALIFORNIA	PEM	DEPRESS	Area	0.175 ACRE	DELINEATE	41.68261600 -120.37855100
W5-8x	CALIFORNIA	PEM	DEPRESS	Area	0.034 ACRE	DELINEATE	40.28771500 -120.48065200
W59-2	CALIFORNIA	PEM	DEPRESS	Area	0.035 ACRE	DELINEATE	41.65995100 -120.39052400
W60-2	CALIFORNIA	PEM	DEPRESS	Area	0.71 ACRE	DELINEATE	41.65621500 -120.39247200
W6-10x	CALIFORNIA	PEM	DEPRESS	Area	0.012 ACRE	DELINEATE	40.07294200 -120.14691700
W61-2	CALIFORNIA	PEM	DEPRESS	Area	0.103 ACRE	DELINEATE	41.76969800 -120.37523600
W6-1x	CALIFORNIA	PEM	DEPRESS	Area	0.002 ACRE	DELINEATE	41.78370900 -120.37238900
W62-2	CALIFORNIA	PEM	DEPRESS	Area	0.182 ACRE	DELINEATE	41.77146800 -120.37492000
W6-2x	CALIFORNIA	PEM	DEPRESS	Area	0.033 ACRE	DELINEATE	41.69102600 -120.37552700
W63-2a	CALIFORNIA	PEM	DEPRESS	Area	0.158 ACRE	DELINEATE	41.77372600 -120.37445100
W63-2b	CALIFORNIA	PEM	DEPRESS	Area	0.376 ACRE	DELINEATE	41.77574900 -120.37405100
W63-2c	CALIFORNIA	PEM	DEPRESS	Area	0.003 ACRE	DELINEATE	41.77736900 -120.37370900
W64-2	CALIFORNIA	PEM	DEPRESS	Area	0.06 ACRE	DELINEATE	41.77091900 -120.37535000
W6-5x	CALIFORNIA	PEM	DEPRESS	Area	0.003 ACRE	DELINEATE	40.90101400 -120.48948400
W6-6	CALIFORNIA	PEM	DEPRESS	Area	0.401 ACRE	DELINEATE	40.64783400 -120.26105700
W6-8x	CALIFORNIA	PSS	DEPRESS	Area	0.078 ACRE	DELINEATE	40.27392500 -120.48216600
W7-10x	CALIFORNIA	PEM	DEPRESS	Area	0.013 ACRE	DELINEATE	40.07303900 -120.14697800
W7-2x	CALIFORNIA	PEM	DEPRESS	Area	0.055 ACRE	DELINEATE	41.68470400 -120.37783600
W7-7	CALIFORNIA	PSS	DEPRESS	Area	1.24 ACRE	DELINEATE	40.62301800 -120.24810100
W7-8X	CALIFORNIA	PSS	DEPRESS	Area	0.036 ACRE	DELINEATE	40.26760300 -120.47617200
W8-2x	CALIFORNIA	PEM	DEPRESS	Area	0.036 ACRE	DELINEATE	41.68156400 -120.37950300
W8-7	CALIFORNIA	PEM	DEPRESS	Area	0.087 ACRE	DELINEATE	40.62012900 -120.24672800
W8-8x	CALIFORNIA	PSS/PFO	DEPRESS	Area	0.171 ACRE	DELINEATE	40.26343300 -120.47221900
W9-2x	CALIFORNIA	PEM	DEPRESS	Area	0.02 ACRE	DELINEATE	41.67125300 -120.38492300

**APPENDIX D**  
**WETLAND AND OHWM**  
**DETERMINATION DATA FORMS**

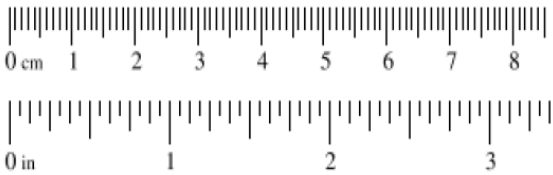
# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

Sampling Point 001-1		Feature ID: D01-1		Date: 8/13/2019	
Project: Zayo Fiberoptic Interconnect Project					
Location Modoc County, California		Photo begin/end file#: See Field Photos			
Investigator(s): MO/JA					
<input checked="" type="checkbox"/> Y / <input type="checkbox"/> N Do normal circumstances exist on the site?		Location Details: Adjacent to highway (U.S. 395) and cattle			
<input type="checkbox"/> Y / <input checked="" type="checkbox"/> N Is the site significantly disturbed?					
		Projection: Lambert Datum: NAD83			
		Coordinates: 41.78380, -120.37184			
<b>Potential anthropogenic influences on the channel system</b> Cattle farm and highway (U.S. 395) adjacent to feature.					
<b>Brief site description:</b> Perennial stream that runs under U.S. 395 and traverses to cattle farm. Feature located in powerline easement.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
Dates ESRI GIS imagery		Gage number:			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events			
<input type="checkbox"/> Existing delineation(s) for site and the most recent event exceeding a 5-year					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studie					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b> </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain un					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the locatio					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on compute		<input type="checkbox"/> Other:			



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

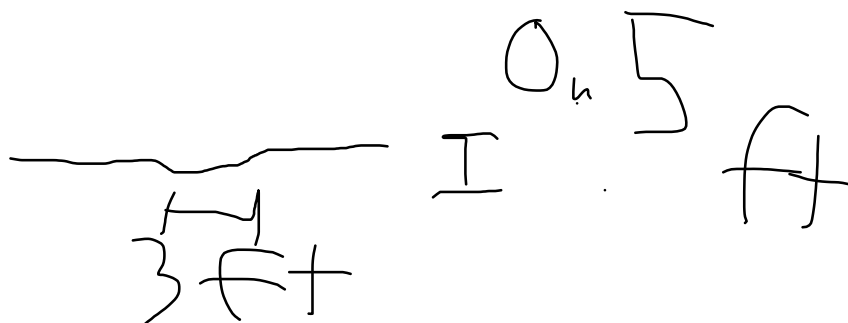


Feature ID: D01-1

Cross section ID:

Date: 8/13/2019 Time:

Cross section drawing



OHWM

GPS point: \_\_\_\_\_

**Indicators**

- ☒ Change in average sediment texture  
☒ Change in vegetation species  
☒ Change in vegetation cover

- ☒ Break in bank slope  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

**Comments:**

Defined bed and bank feature. OHWM evidenced by change in sediment texture, break in bank slope, and changes in vegetation species and cover. Sampling point documents a perennial stream.

Floodplain unit:

- ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit**

Average sediment texture \_\_\_\_\_

Total veg cover: 3 % Tree: 0 % Shrub 0 % Herb 3 %

Community successional stage

- ☐ NA ☐ Mid (herbaceous, shrubs, saplings)  
☒ Early (herbaceous & seedling) ☐ Late (herbaceous, shrubs, mature trees)

**Indicators**

- ☐ Mudcracks  
☒ Ripples  
☒ Drift and/or debris  
☒ Presence of bed and bank  
☒ Benches

- ☐ Soil development  
☒ Surface relief  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

**Comments**

Perennial stream

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

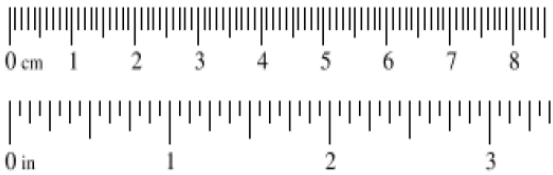
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Sampling Point SP 6-1		Feature ID: D02-1		Date: 8/22/2019	
Project: Zayo Fiberoptic Interconnect Project					
Location Modoc County, CA		Photo begin/end file#: See Field Photos			
Investigator(s): MO, JA					
<input checked="" type="checkbox"/> Y / <input type="checkbox"/> N Do normal circumstances exist on the site?		Location Details: Adjacent to US 395 and cattle pasture Projection: Lambert Datum: NAD83 Coordinates: 41.91054, -120.33044			
<input type="checkbox"/> Y / <input checked="" type="checkbox"/> N Is the site significantly disturbed?					
<b>Potential anthropogenic influences on the channel system</b> Cattle pasture, highway (US 395).					
<b>Brief site description:</b> Intermittent stream that runs under highway and into cattle pasture off project area. Area also in powerline easement.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography Dates ESRI GIS imagery		<input type="checkbox"/> Stream gage data Gage number:			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site and the most recent event exceeding a 5-year <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studie		Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events			
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain un					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the locatio					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on compute		<input type="checkbox"/> Other:			

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

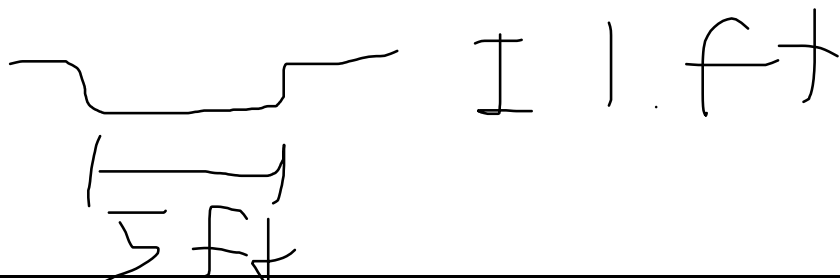


Feature ID: D02-1

Cross section ID:

Date: 8/22/2019 Time:

Cross section drawing



OHW

GPS point: \_\_\_\_\_

**Indicators**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species                  | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

**Comments:**

OHW evidenced by change in sediment texture, break in bank slope, change in vegetation cover. Intermittent stream with well defined bed and bank.

Floodplain unit:

☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit**

Average sediment texture \_\_\_\_\_

Total veg cover: 2 % Tree: 0 % Shrub 0 % Herb 2 %

Community successional stage

- |   |  |
|---|--|
| <input type="checkbox"/> NA                                       | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input checked="" type="checkbox"/> Early (herbaceous & seedling) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

**Indicators**

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Mudcracks                | <input type="checkbox"/> Soil development          |
| <input checked="" type="checkbox"/> Ripples                  | <input checked="" type="checkbox"/> Surface relief |
| <input type="checkbox"/> Drift and/or debris                 | <input type="checkbox"/> Other: _____              |
| <input checked="" type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____              |
| <input checked="" type="checkbox"/> Benches                  | <input type="checkbox"/> Other: _____              |

**Comments**

Stream dry but stream bed indicates riffle-run sections in the presence of baseflow.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

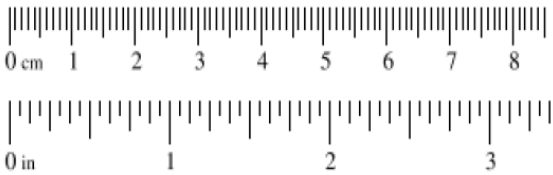
# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

Sampling Point SP 7-1		Feature ID: D03-1		Date: 8/22/2019	
Project: Zayo Fiberoptic Interconnect Project					
Location Modoc County, CA		Photo begin/end file#: See Field Photos			
Investigator(s): MO, JA					
<input checked="" type="checkbox"/> Y / <input type="checkbox"/> N Do normal circumstances exist on the site?		Location Details: Adjacent to US 395 and cattle pasture Projection: Lambert Datum: NAD83 Coordinates: 41.92758, -120.32262			
<input type="checkbox"/> Y / <input checked="" type="checkbox"/> N Is the site significantly disturbed?					
<b>Potential anthropogenic influences on the channel system</b> Cattle pasture, highway					
<b>Brief site description:</b> Perennial stream that runs under highway and into cattle pasture off project area. Area also in powerline easement.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography Dates ESRI GIS imagery		<input type="checkbox"/> Stream gage data Gage number:			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site and the most recent event exceeding a 5-year <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studie		Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events			
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b> </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain un					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the locatio					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on compute		<input type="checkbox"/> Other:			



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

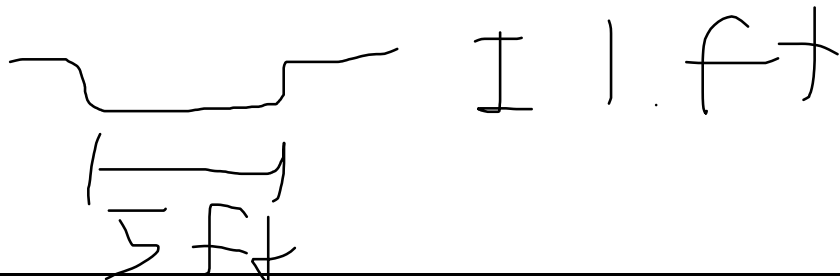


Feature ID: D03-1

Cross section ID:

Date: 8/22/2019 Time:

Cross section drawing



OHW

GPS point: \_\_\_\_\_

**Indicators**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input checked="" type="checkbox"/> Change in vegetation species       | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

**Comments:**

OHW evidenced by change in sediment texture, break in bank slope, change in vegetation species and cover. Perennial stream, scoured channel.

Floodplain unit:

☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit**

Average sediment texture \_\_\_\_\_

Total veg cover: 5 % Tree: 0 % Shrub 0 % Herb 5 %

Community successional stage

- |   |  |
|---|--|
| <input type="checkbox"/> NA                                       | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input checked="" type="checkbox"/> Early (herbaceous & seedling) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

**Indicators**

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Mudcracks               | <input checked="" type="checkbox"/> Soil development |
| <input checked="" type="checkbox"/> Ripples                 | <input checked="" type="checkbox"/> Surface relief   |
| <input checked="" type="checkbox"/> Drift and/or debris     | <input type="checkbox"/> Other: _____                |
| <input checked="" type="checkbox"/> Presence of bed and ban | <input type="checkbox"/> Other: _____                |
| <input checked="" type="checkbox"/> Benches                 | <input type="checkbox"/> Other: _____                |

**Comments**

Perennial stream with strong baseflow

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

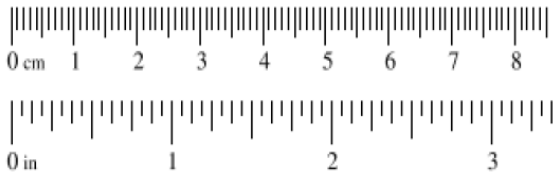
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Sampling Point SP 10-1		Feature ID: D04-1		Date: 8/22/2019	
Project: Zayo Fiberoptic Interconnect Project					
Location Modoc County, CA		Photo begin/end file#: See Field Photos			
Investigator(s): MO, JA					
<input checked="" type="checkbox"/> Y / <input type="checkbox"/> N Do normal circumstances exist on the site?		Location Details: Adjacent to US 395 and cattle pasture Projection: Lambert Datum: NAD83 Coordinates: 41.94515, -120.31452			
<input type="checkbox"/> Y / <input checked="" type="checkbox"/> N Is the site significantly disturbed?					
<b>Potential anthropogenic influences on the channel system</b> Cattle pasture, highway					
<b>Brief site description:</b> Perennial stream (Cottonwood Creek) that runs under highway and into cattle pasture off project area. Area also in powerline easement					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography Dates ESRI GIS Imagery		<input type="checkbox"/> Stream gage data Gage number:			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site and the most recent event exceeding a 5-year <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studie		Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events			
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain un					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the locatio					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on compute		<input type="checkbox"/> Other:			

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay



Feature ID: D04-1

Cross section ID:

Date: 8/22/2019 Time:

Cross section drawing



OHWM

GPS point: \_\_\_\_\_

**Indicators**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input checked="" type="checkbox"/> Change in vegetation species       | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

**Comments:**

OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Perennial stream, scoured channel.

Floodplain unit:

☒ Low-Flow Channel    ☐ Active Floodplain    ☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit**

Average sediment texture \_\_\_\_\_

Total veg cover: 3 % Tree: 0 % Shrub 0 % Herb 3 %

Community successional stage

- |   |  |
|---|--|
| <input type="checkbox"/> NA                                       | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input checked="" type="checkbox"/> Early (herbaceous & seedling) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

**Indicators**

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Mudcracks               | <input checked="" type="checkbox"/> Soil development |
| <input checked="" type="checkbox"/> Ripples                 | <input checked="" type="checkbox"/> Surface relief   |
| <input checked="" type="checkbox"/> Drift and/or debris     | <input type="checkbox"/> Other: _____                |
| <input checked="" type="checkbox"/> Presence of bed and ban | <input type="checkbox"/> Other: _____                |
| <input checked="" type="checkbox"/> Benches                 | <input type="checkbox"/> Other: _____                |

**Comments**

Perennial stream with strong baseflow

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

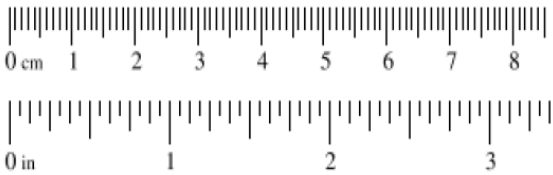
# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

Sampling Point SP 11-1		Feature ID: D05-1		Date: 8/22/2019	
Project: Zayo Fiberoptic Interconnect Project					
Location Modoc County, CA		Photo begin/end file#: See Field Photos			
Investigator(s): MO, JA					
<input checked="" type="checkbox"/> Y / <input type="checkbox"/> N Do normal circumstances exist on the site?		Location Details: Adjacent to US 395 and cattle pasture Projection: Lambert Datum: NAD83 Coordinates: 41.95701, -120.30913			
<input type="checkbox"/> Y / <input checked="" type="checkbox"/> N Is the site significantly disturbed?					
<b>Potential anthropogenic influences on the channel system</b> Cattle pasture, highway					
<b>Brief site description:</b> Perennial stream that runs under highway and into cattle pasture off project area. Area also in powerline easement					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography Dates ESRI GIS imagery		<input type="checkbox"/> Stream gage data Gage number:			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site and the most recent event exceeding a 5-year <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studie		Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events			
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the locatio					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on compute		<input type="checkbox"/> Other:			



Wentworth Size Classes

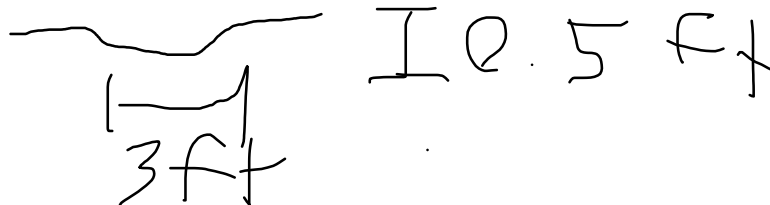
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay



Feature ID: D05-1

Cross section ID:

Date: 8/22/2019 Time:

Cross section drawingOHWM

GPS point: \_\_\_\_\_

Indicators

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

Comments:

OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation species. Riparian wetland on both sides of stream

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit

Average sediment texture \_\_\_\_\_

Total veg cover: 20 % Tree: 0 % Shrub 10 % Herb 10 %

Community successional stage



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedling)



Late (herbaceous, shrubs, mature trees)

Indicators

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bar



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

Comments

Perennial stream with strong baseflow

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

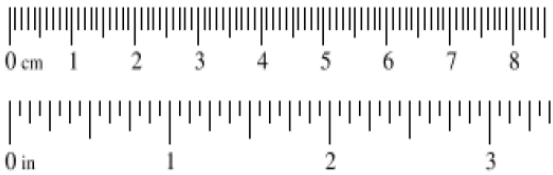
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Sampling Point 14-1		Feature ID: D06-1		Date: 8/22/2019	
Project: Zayo Fiberoptic Interconnect Project					
Location Modoc County, CA		Photo begin/end file#: See Field Photos			
Investigator(s): MO, JA					
<input checked="" type="checkbox"/> Y / <input type="checkbox"/> N Do normal circumstances exist on the site?		Location Details: Adjacent to US 395 and cattle pasture Projection: Lambert Datum: NAD83 Coordinates: 41.95835, -120.30848			
<input type="checkbox"/> Y / <input checked="" type="checkbox"/> N Is the site significantly disturbed?					
<b>Potential anthropogenic influences on the channel system</b> Cattle pasture, highway					
<b>Brief site description:</b> Perennial stream that runs under highway and into cattle pasture off project area. Area also in powerline easement					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography Dates ESRI GIS imagery		<input type="checkbox"/> Stream gage data Gage number:			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site and the most recent event exceeding a 5-year <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studie		Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events			
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain un					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the locatio					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on compute		<input type="checkbox"/> Other:			

Wentworth Size Classes

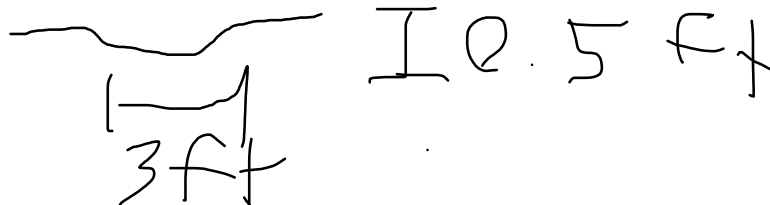
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay



Feature ID: D06-1

Cross section ID:

Date: 8/22/2019 Time:

Cross section drawingOHWM

GPS point: \_\_\_\_\_

Indicators

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input checked="" type="checkbox"/> Change in vegetation species       | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

Comments:

OHWM evidenced by change in sediment texture, break in slope, and change in vegetation cover. Riparian wetlands occur along both sides of stream

Floodplain unit:
☒ Low-Flow Channel    ☐ Active Floodplain    ☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit

Average sediment texture \_\_\_\_\_

Total veg cover: 5 % Tree: 0 % Shrub 0 % Herb 5 %

Community successional stage

- |   |  |
|---|--|
| <input type="checkbox"/> NA                                       | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input checked="" type="checkbox"/> Early (herbaceous & seedling) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

Indicators

- |   |  |
|---|--|
| <input type="checkbox"/> Mudcracks                          | <input checked="" type="checkbox"/> Soil development |
| <input checked="" type="checkbox"/> Ripples                 | <input checked="" type="checkbox"/> Surface relief   |
| <input checked="" type="checkbox"/> Drift and/or debris     | <input type="checkbox"/> Other: _____                |
| <input checked="" type="checkbox"/> Presence of bed and ban | <input type="checkbox"/> Other: _____                |
| <input type="checkbox"/> Benches                            | <input type="checkbox"/> Other: _____                |

Comments

Perennial stream with moderate baseflow

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

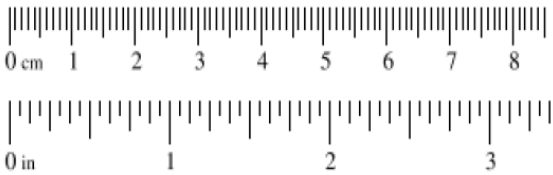
# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Sampling Point <u>15-1</u>		Feature ID: <u>D07-1</u>		Date: <u>8/22/2019</u>	
Project: <u>Zayo Fiberoptic Interconnect Project</u>					
Location <u>Modoc County, CA</u>			Photo begin/end file#: <u>See Field Photos</u>		
Investigator(s): <u>MO, JA</u>					
<input checked="" type="checkbox"/> Y / <input type="checkbox"/> N <input type="checkbox"/> Do normal circumstances exist on the site?		Location Details: <u>Adjacent to US 395 and cattle pasture</u> Projection: <u>Lambert</u> Datum: <u>NAD83</u> Coordinates: <u>41.96349, -120.30631</u>			
<input type="checkbox"/> Y / <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> Is the site significantly disturbed?					
<b>Potential anthropogenic influences on the channel system</b> Cattle pasture, highway					
<b>Brief site description:</b> Intermittent stream that runs under highway and into cattle pasture off project area. Area also in powerline easement					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography Dates <u>ESRI GIS imagery</u>		<input type="checkbox"/> Stream gage data Gage number: _____			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site and the most recent event exceeding a 5-year <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studie		Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events			
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>  </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain un					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the locatio					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on compute		<input type="checkbox"/> Other:			



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

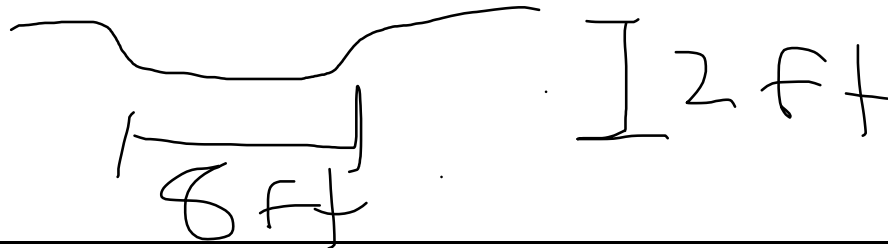


Feature ID: D07-1

Cross section ID:

Date: 8/22/2019 Time:

Cross section drawing



OHWM

GPS point: \_\_\_\_\_

**Indicators**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species                  | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

**Comments:**

OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Intermittent stream, scoured channel.

**Floodplain unit:** ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit**

Average sediment texture \_\_\_\_\_

Total veg cover: 1 % Tree: 0 % Shrub 0 % Herb 1 %

Community successional stage

- |   |  |
|---|--|
| <input type="checkbox"/> NA                                       | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input checked="" type="checkbox"/> Early (herbaceous & seedling) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

**Indicators**

- |   |  |
|---|--|
| <input type="checkbox"/> Mudcracks                          | <input type="checkbox"/> Soil development          |
| <input checked="" type="checkbox"/> Ripples                 | <input checked="" type="checkbox"/> Surface relief |
| <input type="checkbox"/> Drift and/or debris                | <input type="checkbox"/> Other: _____              |
| <input checked="" type="checkbox"/> Presence of bed and bar | <input type="checkbox"/> Other: _____              |
| <input type="checkbox"/> Benches                            | <input type="checkbox"/> Other: _____              |

**Comments**

Stream dry with gravel substrates, indications of riffle-run sections are present

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

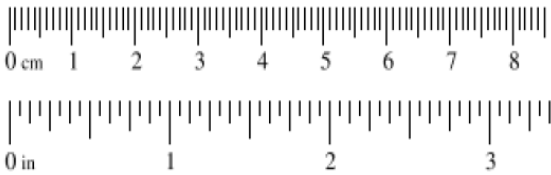
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Sampling Point <u>50-1</u>		Feature ID: <u>D50-1</u>		Date: <u>8/22/2019</u>	
Project: <u>Zayo Fiberoptic Interconnect Project</u>					
Location <u>Modoc County</u>		Photo begin/end file#: <u>See Field Photos</u>			
Investigator(s): <u>PF, MW</u>					
<input checked="" type="checkbox"/> Y / <input type="checkbox"/> N Do normal circumstances exist on the site?		Location Details:  Projection: <u>Lambert</u> Datum: <u>NAD83</u> Coordinates: <u>41.991376, -120.297873</u>			
<input type="checkbox"/> Y / <input checked="" type="checkbox"/> N Is the site significantly disturbed?					
<b>Potential anthropogenic influences on the channel system</b> Maintained roadway ROW and rural residential adjacent.					
<b>Brief site description:</b> Roadside channelized stream at C50-1. Large four sided culvert with wing walls.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography Dates <u>ESRI GIS imagery</u>		<input type="checkbox"/> Stream gage data Gage number: _____			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site and the most recent event exceeding a 5-year <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studie		Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events			
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>  </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain un					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the locatio					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on compute		<input type="checkbox"/> Other:			

Wentworth Size Classes

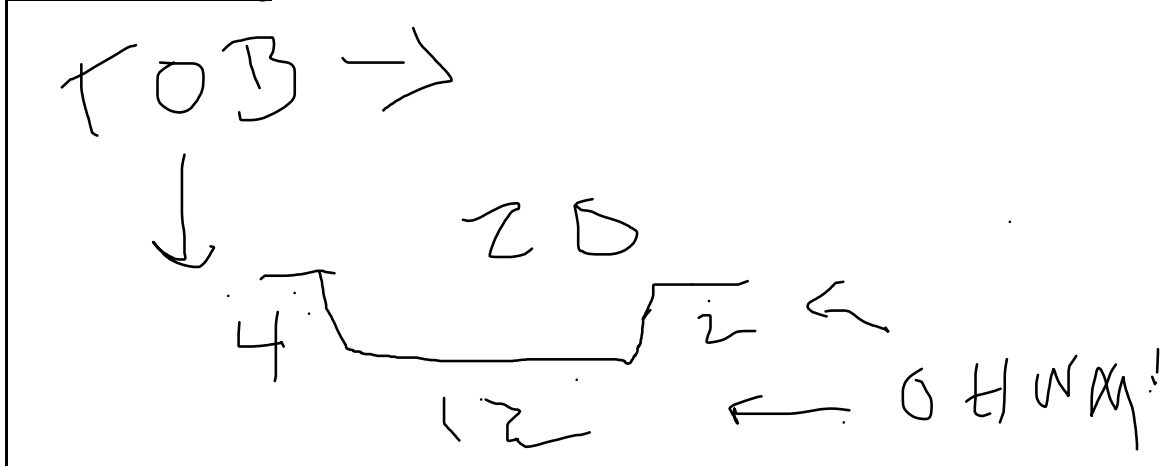
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	Sand
		Coarse sand	
0.020	0.50	Medium sand	
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625		
1/16 0.0012	0.031	Coarse silt	Silt
		Medium silt	
1/32 0.00061	0.0156	Fine silt	
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039		
		Clay	Mud



Feature ID: D50-1

Cross section ID:

Date: 8/22/2019 Time:

**Cross section drawing****OHWM**

GPS point: \_\_\_\_\_

**Indicators**

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

**Comments:**

OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Intermittent stream with scoured channel.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit**

Average sediment texture \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub \_\_\_\_\_ % Herb \_\_\_\_\_ %

Community successional stage



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedling)



Late (herbaceous, shrubs, mature trees)

**Indicators**

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bar



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

**Comments**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

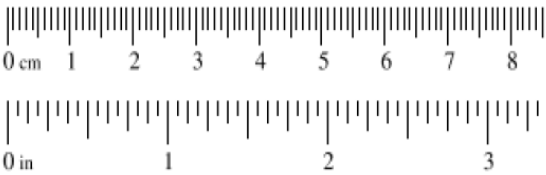
# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Sampling Point <u>51-1</u>		Feature ID: <u>D51-1</u>		Date: <u>8/22/2019</u>	
Project: <u>Zayo Fiberoptic Interconnect Project</u>					
Location <u>Modoc County</u>		Photo begin/end file#: <u>See Field Photos</u>			
Investigator(s): <u>PF, MW</u>					
<input checked="" type="checkbox"/> Y / <input type="checkbox"/> N Do normal circumstances exist on the site?		Location Details:			
<input type="checkbox"/> Y / <input checked="" type="checkbox"/> N Is the site significantly disturbed?		Adjacent to U.S 395			
		Projection: <u>Lambert</u> Datum: <u>NAD83</u>			
		Coordinates: <u>41.98110, -120.29823</u>			
<b>Potential anthropogenic influences on the channel system</b> Maintained roadway ROW, agriculture and rural residential adjacent.					
<b>Brief site description:</b> Roadside channelized stream at C51-1. Top of bank and OHWM are the same.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
Dates <u>ESRI GIS imagery</u>		Gage number: _____			
<input checked="" type="checkbox"/> Topographic maps		Period of record: _____			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events			
<input type="checkbox"/> Existing delineation(s) for site and the most recent event exceeding a 5-year					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studie					
<div style="text-align: center;"> <p>Hydrogeomorphic Floodplain Units</p> </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain un					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the locatio					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on compute		<input type="checkbox"/> Other: _____			



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
		Granule	
0.079	2.00		Sand
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50	Medium sand	
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625		Silt
1/16 0.0012	0.031	Coarse silt	
		Medium silt	
1/32 0.00061	0.0156	Fine silt	
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039		Mud
		Clay	

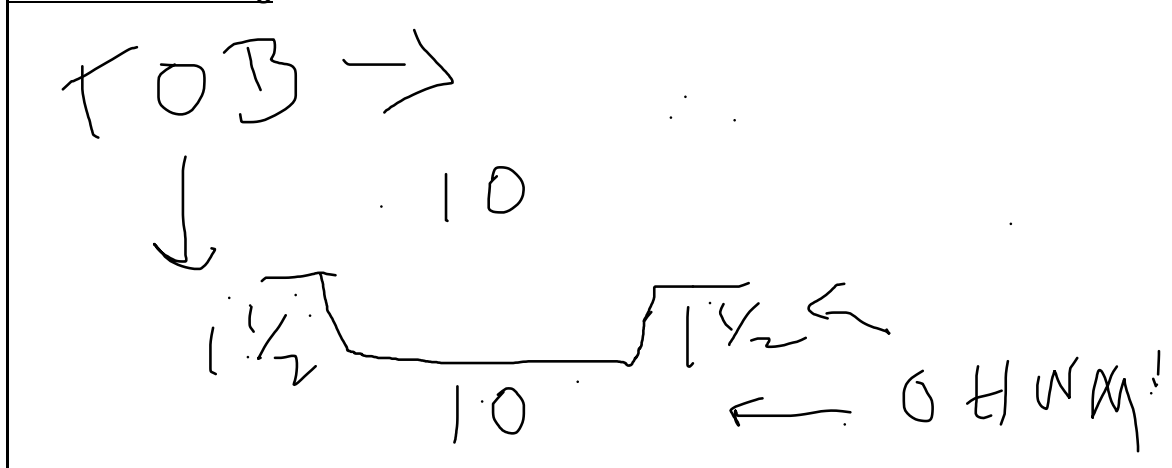


Feature ID: D51-1

Cross section ID:

Date: 8/22/2019 Time:

**Cross section drawing**



**OHWM**

GPS point: \_\_\_\_\_

**Indicators**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species                  | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

**Comments:**

OHWM evidenced by change in sediment texture, break in slope, and change in vegetative cover. Ephemeral stream, scoured channel.

**Floodplain unit:**

☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit**

Average sediment texture \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub \_\_\_\_\_ % Herb \_\_\_\_\_ %

Community successional stage

- |  |  |
|--|--|
| <input type="checkbox"/> NA                            | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input type="checkbox"/> Early (herbaceous & seedling) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

**Indicators**

- |  |   |
|--|---|
| <input type="checkbox"/> Mudcracks               | <input type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples                 | <input type="checkbox"/> Surface relief   |
| <input type="checkbox"/> Drift and/or debris     | <input type="checkbox"/> Other: _____     |
| <input type="checkbox"/> Presence of bed and ban | <input type="checkbox"/> Other: _____     |
| <input type="checkbox"/> Benches                 | <input type="checkbox"/> Other: _____     |

**Comments**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

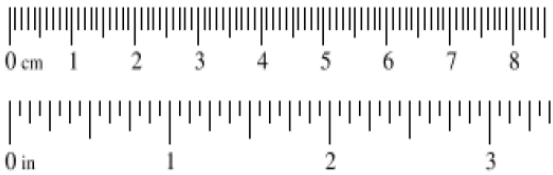
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

Sampling Point <u>54-1</u>		Feature ID: <u>D52-1</u>		Date: <u>8/23/2019</u>	
Project: <u>Zayo Fiberoptic Interconnect Project</u>					
Location <u>Modoc Co, CA</u>		Photo begin/end file#: <u>See Field Photos</u>			
Investigator(s): <u>PF/MW/JA</u>					
<input checked="" type="checkbox"/> Y / <input type="checkbox"/> N <input type="checkbox"/> Do normal circumstances exist on the site?		Location Details: <u>Adjacent to US 395 and cattle pasture</u> Projection: <u>Lambert</u> Datum: <u>NAD83</u> Coordinates: <u>41.9029, -120.33404</u>			
<input type="checkbox"/> Y / <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> Is the site significantly disturbed?					
<b>Potential anthropogenic influences on the channel system</b> Highway and cattle pasture adjacent to feature					
<b>Brief site description:</b> Dry ephemeral channel located in power line easement adjacent to US 395 and cattle pasture. Channel is connected to roadside ditch					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography Dates <u>ESRI GIS imagery</u>		<input type="checkbox"/> Stream gage data Gage number: _____			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site and the most recent event exceeding a 5-year <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studie		Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events			
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the locatio					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on compute		<input type="checkbox"/> Other:			

Wentworth Size Classes

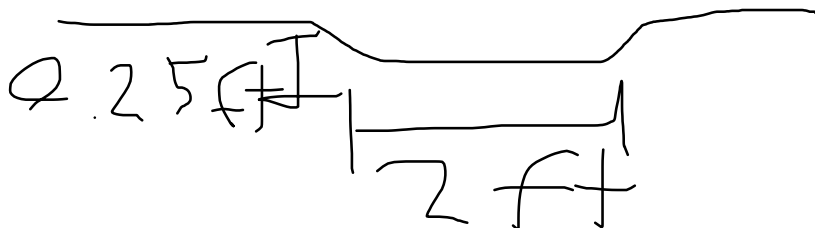
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay



Feature ID: D52-1

Cross section ID:

Date: 8/23/2019 Time:

**Cross section drawing****OHW**

GPS point: \_\_\_\_\_

**Indicators**

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

**Comments:**

Cobble and stone located in stream bed. Feature dry during field activities. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Ephemeral stream, scoured channel

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit**Average sediment texture Sandy loam

Total veg cover: 0 % Tree: 0 % Shrub 0 % Herb 0 %

Community successional stage



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedling)



Late (herbaceous, shrubs, mature trees)

**Indicators**

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bar



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

**Comments**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

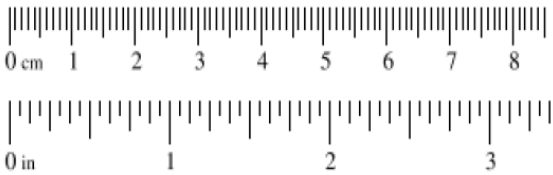
# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Sampling Point <u>55-1</u>		Feature ID: <u>D53-1</u>	Date: <u>8/23/2019</u>
Project: <u>Zayo Fiberoptic Interconnect Project</u>			
Location <u>Modoc Co, California</u>		Photo begin/end file#: <u>See Field Photos</u>	
Investigator(s): <u>PF/MW/JA</u>			
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?	Location Details: <u>Adjacent to US 395 and cattle pasture</u>	
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?		
		Projection: <u>Lambert</u> Datum: <u>NAD83</u>	
		Coordinates: <u>41.89572, -120.33763</u>	
<b>Potential anthropogenic influences on the channel system</b> Highway and cattle pasture adjacent to feature.			
<b>Brief site description:</b> Perennial stream located adjacent to US 395 and cattle pasture. Stream contains strong base flow and travels under highway via culvert. Stream name Willow Creek.			
<b>Checklist of resources (if available)</b>			
<input checked="" type="checkbox"/> Aerial photography Dates <u>ESRI GIS imagery</u>		<input type="checkbox"/> Stream gage data Gage number: _____	
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site and the most recent event exceeding a 5-year <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studie		Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events	
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW</b>			
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.			
units.			
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain un			
a) Record the floodplain unit and GPS position.			
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.			
c) Identify any indicators present at the locatio			
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.			
5. Identify the OHWM and record the indicators. Record the OHWM position via:			
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS	
<input type="checkbox"/> Digitized on compute		<input type="checkbox"/> Other:	



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay



Feature ID: D53-1

Cross section ID:

Date: 8/23/2019 Time:

**Cross section drawing****OHWM**

GPS point: \_\_\_\_\_

**Indicators**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input checked="" type="checkbox"/> Change in vegetation species       | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

**Comments:**

Strong base flow with strong riffle-run-pool sections. OHWM evidenced by change in sediment texture, break in bank slope, and changes in vegetation species and cover. Perennial stream, scoured channel

**Floodplain unit:**
☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit**Average sediment texture Sandy loamTotal veg cover: 15 % Tree: 0 % Shrub 5 % Herb 10 %

Community successional stage

- |  |  |
|--|--|
| <input type="checkbox"/> NA                            | <input checked="" type="checkbox"/> Mid (herbaceous, shrubs, saplings) |
| <input type="checkbox"/> Early (herbaceous & seedling) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)       |

**Indicators**

- |   |  |
|---|--|
| <input type="checkbox"/> Mudcracks                          | <input checked="" type="checkbox"/> Soil development |
| <input checked="" type="checkbox"/> Ripples                 | <input checked="" type="checkbox"/> Surface relief   |
| <input checked="" type="checkbox"/> Drift and/or debris     | <input type="checkbox"/> Other: _____                |
| <input checked="" type="checkbox"/> Presence of bed and bar | <input type="checkbox"/> Other: _____                |
| <input checked="" type="checkbox"/> Benches                 | <input type="checkbox"/> Other: _____                |

**Comments**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

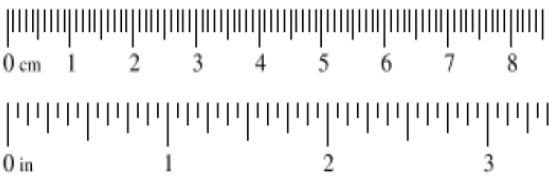
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Sampling Point 102-1		Feature ID: D100-1		Date: 8/22/2019	
Project: Zayo Fiberoptic Interconnect Project					
Location Modoc Co, California		Photo begin/end file#: See Field Photos			
Investigator(s): ZB & TK					
<input checked="" type="checkbox"/> Y / <input type="checkbox"/> N Do normal circumstances exist on the site?		Location Details: Adjacent to U.S. 395 east of Goose Lake Projection: Lambert Datum: NAD83 Coordinates: 41.82226, -120.35088			
<input type="checkbox"/> Y / <input checked="" type="checkbox"/> N Is the site significantly disturbed?					
<b>Potential anthropogenic influences on the channel system</b> Highway and roadside.					
<b>Brief site description:</b> Small meandering ephemeral stream that reaches C100-1 culvert and moves under highway. On a 25-30% slope above road. No flow during time of survey.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography Dates ESRI GIS imagery		<input type="checkbox"/> Stream gage data Gage number:			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input checked="" type="checkbox"/> Existing delineation(s) for site and the most recent event exceeding a 5-year <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studie		Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events			
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b> </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain un					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the locatio					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on compute		<input type="checkbox"/> Other:			

Wentworth Size Classes

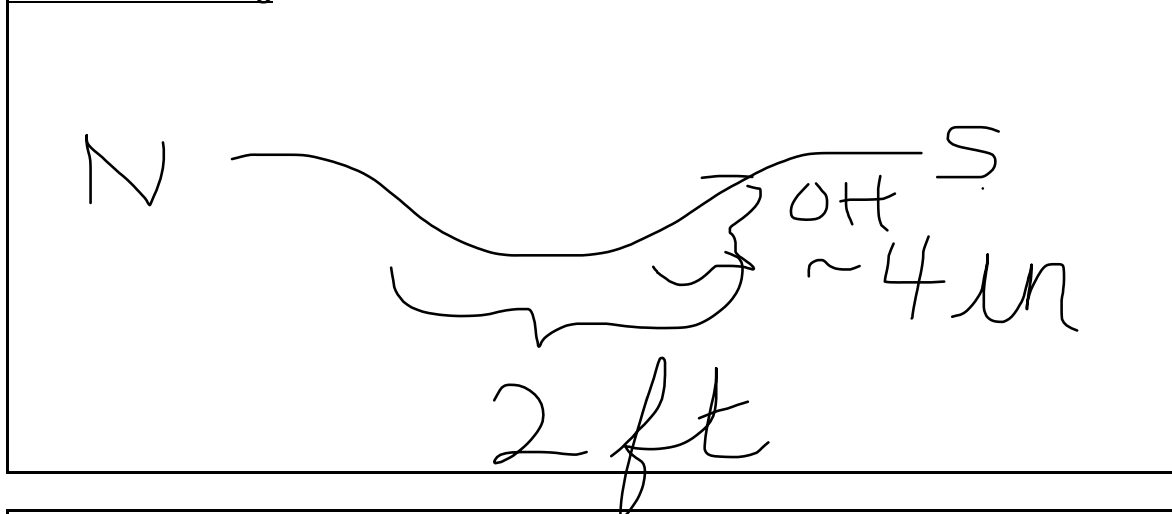
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
		Granule	
0.079	2.00		Sand
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50	Medium sand	
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625		Silt
1/16 0.0012	0.031	Coarse silt	
		Medium silt	
1/32 0.00061	0.0156	Fine silt	
1/64 0.00031	0.0078	Very fine silt	Mud
1/128 0.00015	0.0039	Clay	



Feature ID: D100-1

Cross section ID:

Date: 8/22/2019 Time:

Cross section drawingOHWM

GPS point: \_\_\_\_\_

Indicators☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☒ Other: Minor sediment sorting☐ Other: \_\_\_\_\_Comments:

Cobbles and pebbles line stream bed. Bed and bank feature. OHWM evidenced by change in sediment texture, break in slope, change in vegetation cover, and scour (minor sediment sorting). Ephemeral stream, scoured channel.

Floodplain unit:☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit

Average sediment texture \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub \_\_\_\_\_ % Herb \_\_\_\_\_ %

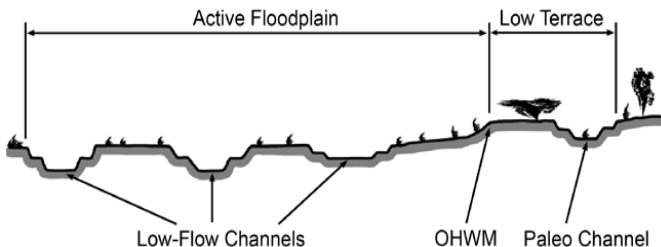
Community successional stage

☐ NA☐ Early (herbaceous & seedling)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

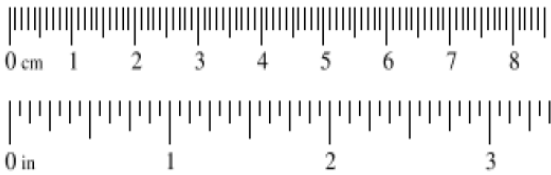
# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Sampling Point 105-1		Feature ID: D101-1		Date: 8/22/2019	
Project: Zayo Fiberoptic Interconnect Project					
Location Modoc Co, California		Photo begin/end file#: See Field Photos			
Investigator(s): ZB & TK					
<input checked="" type="checkbox"/> Y / <input type="checkbox"/> N Do normal circumstances exist on the site?		Location Details: Adjacent to U.S. 395 east of Goose Lake Projection: Lambert Datum: NAD83 Coordinates: 41.83360, -120.35679			
<input type="checkbox"/> Y / <input checked="" type="checkbox"/> N Is the site significantly disturbed?					
<b>Potential anthropogenic influences on the channel system</b> U.S. 395 (highway).					
<b>Brief site description:</b> Unvegetated roadside ditch running parallel to highway. Upslope of ditch about 30% slope, most likely contributing to larger sediment source.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography Dates ESRI GIS imagery		<input type="checkbox"/> Stream gage data Gage number:			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site and the most recent event exceeding a 5-year <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studie		Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events			
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>   </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain un					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the locatio					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on compute		<input type="checkbox"/> Other:			



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D101-1

Cross section ID:

Date: 8/22/2019 Time:

**Cross section drawing****OHWM**

GPS point: \_\_\_\_\_

**Indicators**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☒ Other: Deposition sorting in areas☐ Other: \_\_\_\_\_**Comments:**

Sediments below OHWM either sandy or larger pebbles and cobbles due to scour. Shallow bed and bank feature. OHWM evidenced by changes in sediment texture, break in slope, change in vegetation cover, and scour (deposition sorting in areas).

**Floodplain unit:**☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit**

Average sediment texture \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub \_\_\_\_\_ % Herb \_\_\_\_\_ %

Community successional stage

☐ NA☐ Early (herbaceous & seedling)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators**☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bar☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

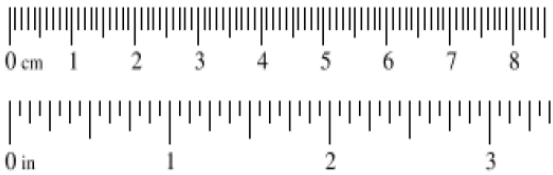
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Sampling Point 108-1		Feature ID: D102-1		Date: 8/22/2019	
Project: Zayo Fiberoptic Interconnect Project					
Location Modoc Co, California		Photo begin/end file#: See Field Photos			
Investigator(s): ZB, TK					
<input checked="" type="checkbox"/> Y / <input type="checkbox"/> N Do normal circumstances exist on the site?		Location Details: Adjacent to U.S. 395 in undeveloped lands Projection: Lambert Datum: NAD83 Coordinates: 41.84021, -120.35826			
<input type="checkbox"/> Y / <input checked="" type="checkbox"/> N Is the site significantly disturbed?					
<b>Potential anthropogenic influences on the channel system</b> Private access road nearby, highway, invasive species throughout.					
<b>Brief site description:</b> Meandering ephemeral stream going under highway through culvert C104-1, direction east/west. Large boulders and cobbles lining stream bed. Invasive grasses					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography Dates ESRI GIS imagery		<input type="checkbox"/> Stream gage data Gage number:			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps		Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events			
<input checked="" type="checkbox"/> Existing delineation(s) for site and the most recent event exceeding a 5-year <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studie					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>  </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

Wentworth Size Classes

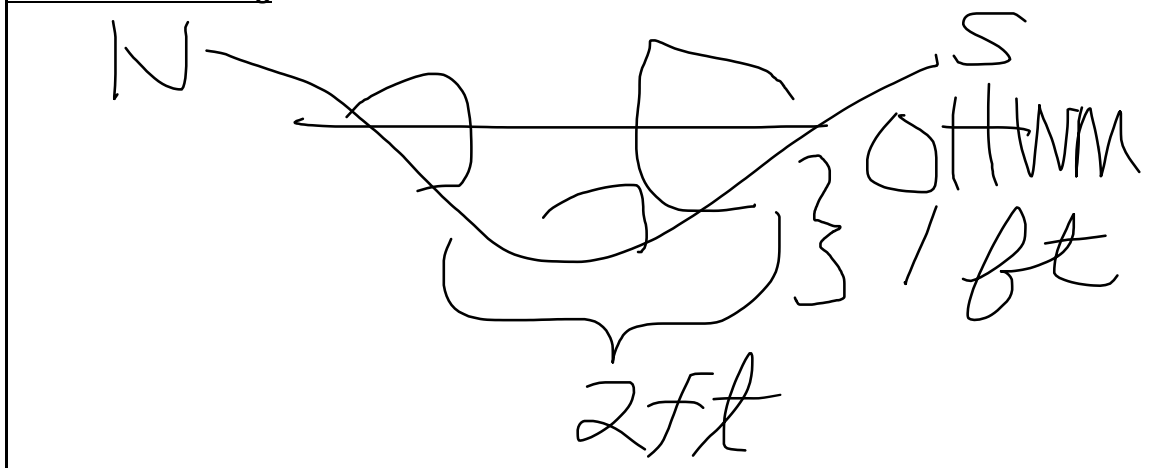
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay



Feature ID: D102-1

Cross section ID:

Date: 8/22/2019 Time:

Cross section drawingOHWM

GPS point: \_\_\_\_\_

Indicators

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: Drift deposits



Change in vegetation cover



Other: \_\_\_\_\_

Comments:

Defined bed and bank feature. Channel lined with boulders, cobbles and pebbles. OHWM evidenced by changes in sediment texture, break in bank slope, and change in vegetation cover.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit

Average sediment texture \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub \_\_\_\_\_ % Herb \_\_\_\_\_ %

Community successional stage



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedling)



Late (herbaceous, shrubs, mature trees)

Indicators

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

Comments

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

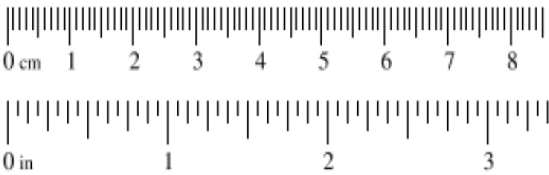
# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Sampling Point 109-1		Feature ID: D103-1		Date: 8/22/2019	
Project: Zayo Fiberoptic Interconnect Project					
Location Modoc Co, California		Photo begin/end file#: See Field Photos			
Investigator(s): ZB, TK					
<input checked="" type="checkbox"/> Y / <input type="checkbox"/> N Do normal circumstances exist on the site?		Location Details: Adjacent to U.S. 395 in undeveloped lands. Projection: Lambert Datum: NAD83 Coordinates: 41.84123, -120.35844			
<input type="checkbox"/> Y / <input checked="" type="checkbox"/> N Is the site significantly disturbed?					
<b>Potential anthropogenic influences on the channel system</b> Fencing, invasive species throughout, private access road, some larger trash littered throughout.					
<b>Brief site description:</b> Drainage lies beyond the boundary to the highway through C105-1. Direction of east/west. Stream bank not greatly defined in many areas, due to large boulders that					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography Dates ESRI GIS imagery		<input type="checkbox"/> Stream gage data Gage number:			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps		Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events			
<input checked="" type="checkbox"/> Existing delineation(s) for site and the most recent event exceeding a 5-year <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studie					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>  </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain un					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the locatio					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on compute		<input type="checkbox"/> Other:			



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
		Granule	
0.079	2.00		Sand
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50	Medium sand	
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625		Silt
1/16 0.0012	0.031	Coarse silt	
		Medium silt	
1/32 0.00061	0.0156	Fine silt	
1/64 0.00031	0.0078	Very fine silt	Mud
1/128 0.00015	0.0039	Clay	



Feature ID: D103-1

Cross section ID:

Date: 8/22/2019 Time:

Cross section drawingOHWM

GPS point: \_\_\_\_\_

Indicators☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☒ Other: lichen line boulders☐ Other: \_\_\_\_\_Comments:

Flow was not present during time of survey. Bed and bank feature, OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Lichen lined boulders also present.

Floodplain unit:☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit

Average sediment texture \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub \_\_\_\_\_ % Herb \_\_\_\_\_ %

Community successional stage

☐ NA☐ Early (herbaceous & seedling)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

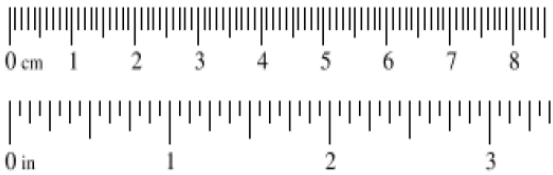
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Sampling Point 110-1		Feature ID: D104-1		Date: 8/22/2019	
Project: Zayo Fiberoptic Interconnect Project					
Location Modoc Co, California		Photo begin/end file#: See Field Photos			
Investigator(s): Zb, Tk					
<input checked="" type="checkbox"/> Y / <input type="checkbox"/> N Do normal circumstances exist on the site?		Location Details: Adjacent to U.S. 395 in undeveloped lands Projection: Lambert Datum: NAD83 Coordinates: 41.86146, -120.35166			
<input type="checkbox"/> Y / <input checked="" type="checkbox"/> N Is the site significantly disturbed?					
<b>Potential anthropogenic influences on the channel system</b> Adjacent roadway (U.S. 395).					
<b>Brief site description:</b> Small channel running perpendicular to the highway. Upstream portion is less defined and vegetated.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography Dates ESRI GIS imagery		<input type="checkbox"/> Stream gage data Gage number:			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site and the most recent event exceeding a 5-year <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studie		Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events			
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>  </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain un					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the locatio					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on compute		<input type="checkbox"/> Other:			

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay



Feature ID: D104-1

Cross section ID:

Date: 8/22/2019 Time:

**Cross section drawing****OHW**

GPS point: \_\_\_\_\_

**Indicators**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☐ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Substrate consists of gravel and small cobble on top of large boulders and bed rock. Some sorting present. Vegetation present in up stream 20' of channel. Downstream portion non vegetated. Bed and bank feature. OHWM evidenced by change in

**Floodplain unit:**☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit**

Average sediment texture \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub \_\_\_\_\_ % Herb \_\_\_\_\_ %

Community successional stage

☐ NA☐ Early (herbaceous & seedling)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators**☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bar☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

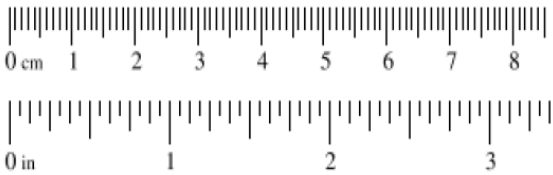
# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Sampling Point <u>111-1</u>		Feature ID: <u>D105-1</u>		Date: <u>8/22/2019</u>	
Project: <u>Zayo Fiberoptic Interconnect Project</u>					
Location <u>Modoc Co, California</u>		Photo begin/end file#: <u>See Field Photos</u>			
Investigator(s): <u>Zb, Tk</u>					
<input checked="" type="checkbox"/> Y / <input type="checkbox"/> N <input type="checkbox"/> Do normal circumstances exist on the site?		Location Details: <u>Adjacent to U.S. 395 in undeveloped lands.</u> Projection: <u>Lambert</u> Datum: <u>NAD83</u> Coordinates: <u>41.86395, -120.35040</u>			
<input type="checkbox"/> Y / <input type="checkbox"/> N <input checked="" type="checkbox"/> Is the site significantly disturbed?					
<b>Potential anthropogenic influences on the channel system</b> Adjacent roadway (U.S. 395).					
<b>Brief site description:</b> Small channel running perpendicular to the highway. Upstream portion is less defined and vegetated. Channel does not extend to edge of ROW.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography Dates <u>ESRI GIS imagery</u>		<input type="checkbox"/> Stream gage data Gage number: _____			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site and the most recent event exceeding a 5-year <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studie		Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events			
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>  </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain un					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the locatio					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on compute		<input type="checkbox"/> Other:			



Wentworth Size Classes

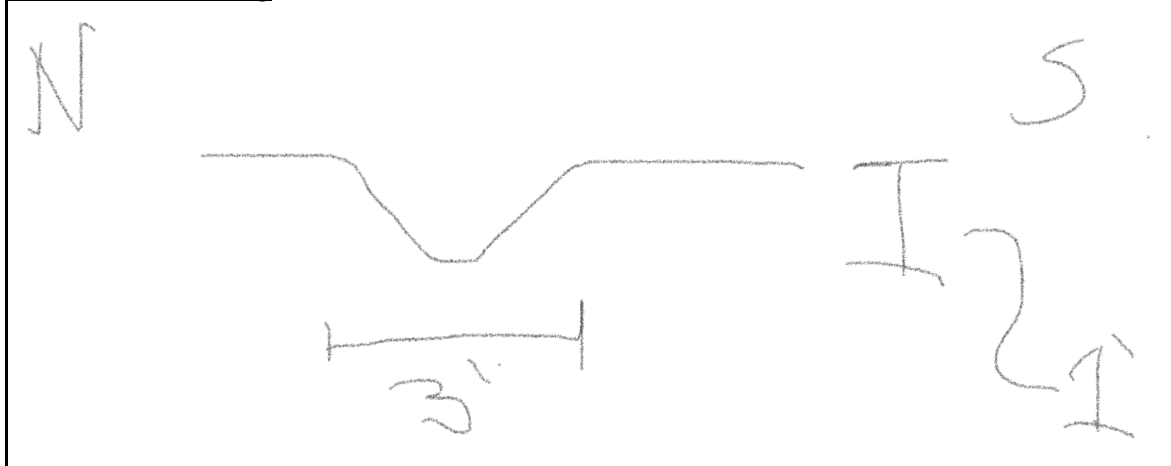
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay



Feature ID: D105-1

Cross section ID:

Date: 8/22/2019 Time:

**Cross section drawing****OHW**

GPS point: \_\_\_\_\_

**Indicators**

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species                  | <input type="checkbox"/> Other: _____        |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____        |

**Comments:**

Substrate consists of gravel and small cobble on top of large boulders and bed rock. Some sorting present. Vegetation present in up stream half of channel. Downstream portion non vegetated. OHWM evidenced by change in sediment texture and

**Floodplain unit:**
☐ Low-Flow Channel    ☐ Active Floodplain    ☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit**

Average sediment texture \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub \_\_\_\_\_ % Herb \_\_\_\_\_ %

Community successional stage

- |  |  |
|--|--|
| <input type="checkbox"/> NA                            | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input type="checkbox"/> Early (herbaceous & seedling) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

**Indicators**

- |  |   |
|--|---|
| <input type="checkbox"/> Mudcracks               | <input type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples                 | <input type="checkbox"/> Surface relief   |
| <input type="checkbox"/> Drift and/or debris     | <input type="checkbox"/> Other: _____     |
| <input type="checkbox"/> Presence of bed and bar | <input type="checkbox"/> Other: _____     |
| <input type="checkbox"/> Benches                 | <input type="checkbox"/> Other: _____     |

**Comments**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

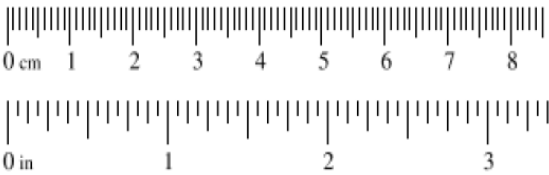
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Sampling Point 112-1		Feature ID: D106-1		Date: 8/22/2019	
Project: Zayo Fiberoptic Interconnect Project					
Location Modoc Co, California		Photo begin/end file#: See Field Photos			
Investigator(s): Zb, Tk					
<input checked="" type="checkbox"/> Y / <input type="checkbox"/> N Do normal circumstances exist on the site?		Location Details: Adjacent to U.S 395 west of Goose Lake Projection: Lambert Datum: NAD83 Coordinates: 41.86722, -120.34842			
<input type="checkbox"/> Y / <input checked="" type="checkbox"/> N Is the site significantly disturbed?					
<b>Potential anthropogenic influences on the channel system</b> Adjacent roadway (U.S. 395).					
<b>Brief site description:</b> Small channel running perpendicular to the highway.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography Dates ESRI GIS imagery		<input type="checkbox"/> Stream gage data Gage number:			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps		Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events			
<input checked="" type="checkbox"/> Existing delineation(s) for site and the most recent event exceeding a 5-year <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studie					
<div style="text-align: center;"> <p>Hydrogeomorphic Floodplain Units</p> </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain un					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the locatio					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on compute		<input type="checkbox"/> Other:			

Wentworth Size Classes

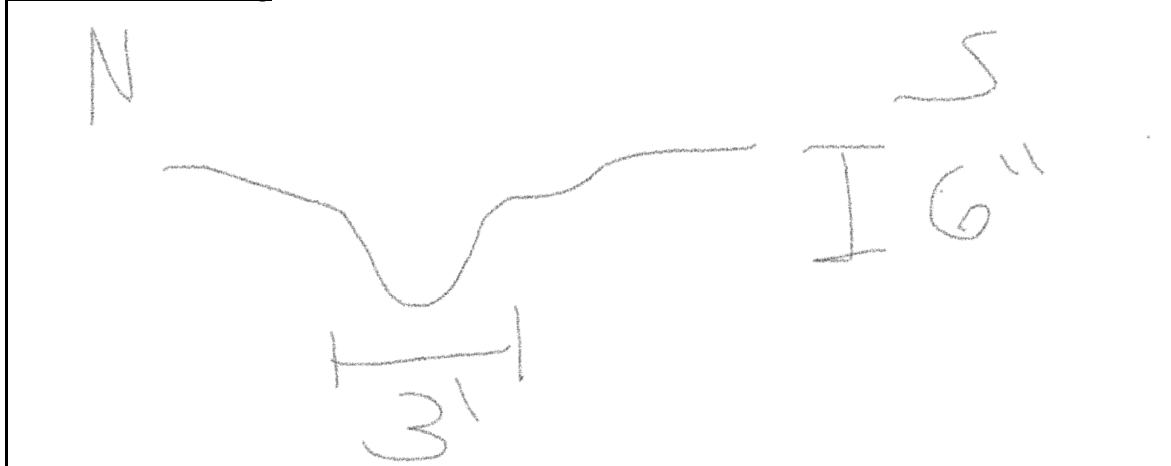
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
		Granule	
0.079	2.00		Sand
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50	Medium sand	
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625		Silt
1/16 0.0012	0.031	Coarse silt	
		Medium silt	
1/32 0.00061	0.0156	Fine silt	
1/64 0.00031	0.0078	Very fine silt	Mud
1/128 0.00015	0.0039	Clay	



Feature ID: D106-1

Cross section ID:

Date: 8/22/2019 Time:

**Cross section drawing****OHW**

GPS point: \_\_\_\_\_

**Indicators**

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species                  | <input type="checkbox"/> Other: _____        |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____        |

**Comments:**

Substrate consists of gravel and small cobble on top of large boulders and bed rock. Some sorting present. Bed and bank feature, OHWM evidenced by change in sediment texture along bank and change in vegetation cover. Intermittent stream,

**Floodplain unit:**
☐ Low-Flow Channel    ☐ Active Floodplain    ☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit**

Average sediment texture \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub \_\_\_\_\_ % Herb \_\_\_\_\_ %

Community successional stage

- |  |  |
|--|--|
| <input type="checkbox"/> NA                            | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input type="checkbox"/> Early (herbaceous & seedling) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

**Indicators**

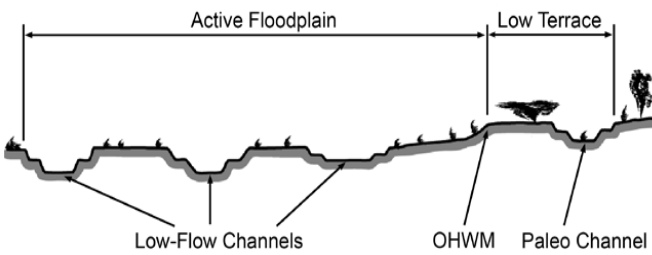
- |   |   |
|---|---|
| <input type="checkbox"/> Mudcracks                | <input type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples                  | <input type="checkbox"/> Surface relief   |
| <input type="checkbox"/> Drift and/or debris      | <input type="checkbox"/> Other: _____     |
| <input type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____     |
| <input type="checkbox"/> Benches                  | <input type="checkbox"/> Other: _____     |

**Comments**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

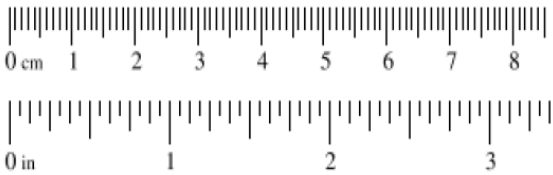
# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Sampling Point <u>115-1</u>		Feature ID: <u>D107-1</u>		Date: <u>8/23/2019</u>	
Project: <u>Zayo Fiberoptic Interconnect Project</u>					
Location <u>Modoc County</u>		Photo begin/end file#: <u>See Field Photos</u>			
Investigator(s): <u>Mo, Tk, Zb</u>					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site?		Location Details: <u>Adjacent to U.S. 395 in juniper/sagebrush.</u> Projection: <u>Lambert</u> Datum: <u>NAD83</u> Coordinates: <u>41.87676, -120.34501</u>			
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?					
<b>Potential anthropogenic influences on the channel system</b> Large amount of cut brush and trees potentially influencing path of drainage.					
<b>Brief site description:</b> Many smaller channels coming into one drainage and culvert. Shrubs throughout area. Stream bed lines with cobbles and small boulders indicating path of water.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography <input type="checkbox"/> Stream gage data <b>Dates</b> <u>ESRI GIS imagery</u> <b>Gage number:</b> _____		<input type="checkbox"/> Topographic maps Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events			
<input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input checked="" type="checkbox"/> Existing delineation(s) for site and the most recent event exceeding a 5-year <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studie					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>   </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the locatio					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on compute		<input type="checkbox"/> Other:			



Wentworth Size Classes

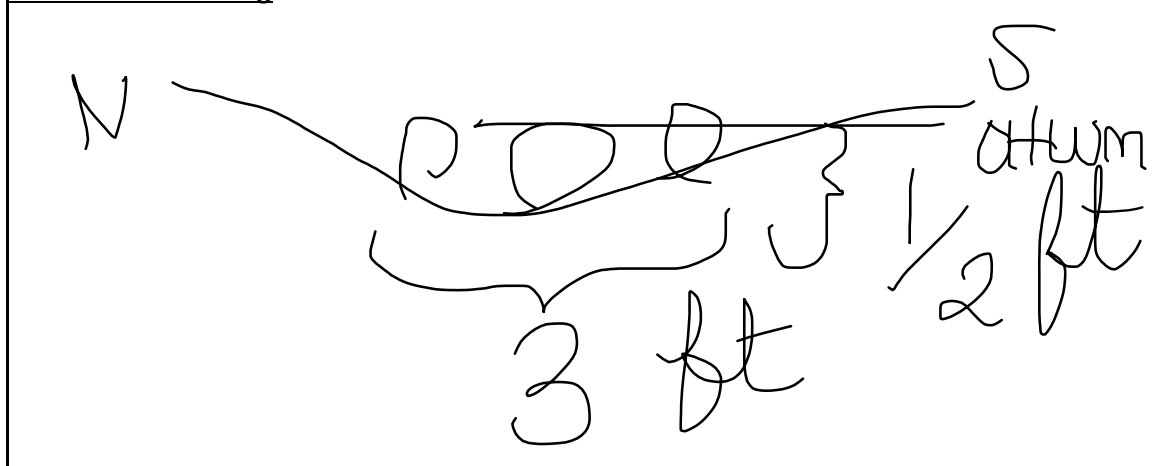
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay



Feature ID: D107-1

Cross section ID:

Date: 8/23/2019 Time:

Cross section drawingOHWM

GPS point: \_\_\_\_\_

Indicators

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

Comments:

No true average cross section for section above, area variable. OHWM evidenced by change in sediment texture, break in slope, and change in vegetation cover.  
Ephemeral stream, scoured channel.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit

Average sediment texture \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub \_\_\_\_\_ % Herb \_\_\_\_\_ %

Community successional stage



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedling)



Late (herbaceous, shrubs, mature trees)

Indicators

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bar



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

Comments

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/21/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: SP 02-1 Feature ID: W01-1  
 Investigator(s): M. Oats, J. Ahn Section, Township, Range: 33, T46N, R14E  
 Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 41.79015 Long: -120.36928 Datum: NAD83  
 Soil Map Unit Name: (135) Drews gravelly loam, 0 to 9 percent slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☒ No ☐  
 Hydric Soil Present? Yes ☒ No ☐  
 Wetland Hydrology Present? Yes ☒ No ☐

Is the Sampled Area within a Wetland? Yes ☒ No ☐

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour \_\_\_\_\_ OHWM Mapped \_\_\_\_\_  
 Feature Designation: Perennial \_\_\_\_\_ Intermittent \_\_\_\_\_ Ephemeral \_\_\_\_\_  
 Natural Drainage \_\_\_\_\_ Artificial Drainage \_\_\_\_\_ Navigable Water \_\_\_\_\_

Remarks: Wetland parameters are present as indicated by hydrology indicator (saturation and high water table), hydric soils (F3), and a dominance of hydrophytic vegetation.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)				
1				
2				
3				
4				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: 15' radius)				
1				
2				
3				
4				
5				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5' radius)				
1	Phaarar Phalaris arundinacea	85	YES	FACW
2	Helnut Helianthus nuttallii	10	NO	FACW
3	Rumcri Rumex crispus	5	NO	FAC
4				
5				
6				
7				
8				
9				
10				
11				
		100	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

% Bare Ground in Herb  0 % Cover of Biotic

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC:  1 (A)

Total Number of Dominant Species Across All Strata:  1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC:  1 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <input type="text"/> 0	x 1 = <input type="text"/> 0
FACW species <input type="text"/> 95	x 2 = <input type="text"/> 190
FAC species <input type="text"/> 5	x 3 = <input type="text"/> 15
FACU species <input type="text"/> 0	x 4 = <input type="text"/> 0
UPL species <input type="text"/> 0	x 5 = <input type="text"/> 0
Column Totals: <input type="text"/> 100 (A)	<input type="text"/> 205 (B)
Prevalence Index = B/A = <input type="text"/> 2.05	

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation  
 Yes 2 - Dominance Test is >50%  
 Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☒ No ☐

Remarks: Hydrophytic vegetation dominant as indicated by a dominance of FACW species.

SOIL							Sampling Point: SP 02-1	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10 YR 4/2	100					Sandy loam	Prominent redox concentrations
2-12	10 YR 4/2	95	5 YR 5/8	5	C	M	Sandy loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>					
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )					
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )					
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Reduced Vertic (F18)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )	<input checked="" type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Red Parent Material (TF2)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )	<input type="checkbox"/> Redox Dark Surface (F6)		<input type="checkbox"/> Other (Explain in Remarks)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)							
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>			<b>Hydric Soil Present?</b>					
Type:	Shovel refusal							
Depth (inches):	12		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
<b>Remarks:</b> Hydric soil indicators are observed and meet indicators of F3 Depleted Matrix, with indicators of a soil that is at least 6 inches thick starting in the top 10 inches of soil surface, with distinct or prominent redox concentrations (soft masses or pore linings), in a matrix with a value of 4 or more and chroma of 2 or less.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>			<b>Secondary Indicators (2 or more required)</b>					
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )					
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )					
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )					
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input checked="" type="checkbox"/> Drainage Patterns (B10)					
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)					
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)					
<input checked="" type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)					
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)					
<b>Field Observations:</b>			<b>Wetland Hydrology Present?</b>					
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):					
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):					
Saturation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):					
(includes capillary fringe)			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicators present as evidenced by surface soil cracks in addition to drainage patterns and FAC-Neutral Test.								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/21/2019

Applicant/Owner: Zayo Group State: California Sampling Point: SP 03-1 Feature ID: U01-1

Investigator(s): M. Oats, J. Ahn Section, Township, Range: 33, T46N, R14E

Local relief (hillside, terrace, etc.): Roadside slope Local Relief (concave, convex, none): Convex Slope (%): 3

Subregion (LRR): D Lat: 41.79019 Long: -120.36934 Datum: NAD83

Soil Map Unit Name: None NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? ☐ Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? ☐ (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☐ No ☒ x

Hydric Soil Present? Yes ☐ No ☒ x

Wetland Hydrology Present? Yes ☐ No ☒ x

Is the Sampled Area within a Wetland? Yes ☐ No ☒ x

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_

Indicators: Defined bed and bank: \_\_\_\_\_ Scour: \_\_\_\_\_ OHWM Mapped: \_\_\_\_\_

Feature Designation: Perennial: \_\_\_\_\_ Intermittent: \_\_\_\_\_ Ephemeral: \_\_\_\_\_

Natural Drainage: \_\_\_\_\_ Artificial Drainage: \_\_\_\_\_ Navigable Water: \_\_\_\_\_

Remarks: Sample point lacks all indicators of wetland parameters. Upland pair point to W01-1.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)				
1				
2				
3				
4				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: 15' radius)				
1				
2				
3				
4				
5				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5' radius)				
1 Broine	Bromus inermis	50	YES	FACU
2 Tradub	Tragopogon dubius	15	NO	UPL
3 Lacser	Lactuca serriola	10	NO	FACU
4 Calocc	Calycanthus occidentalis	15	NO	FAC
5 Alysism	Alyssum simplex	5	NO	UPL
6				
7				
8				
9				
10				
11				
		95	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

% Bare Ground in Herb ☐ 5 % Cover of Biotic ☐

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: ☐ 0 (A)

Total Number of Dominant Species Across All Strata: ☐ 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ☐ 0 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species	0 x 1 =	0
FACW species	0 x 2 =	0
FAC species	15 x 3 =	45
FACU species	60 x 4 =	240
UPL species	20 x 5 =	100
Column Totals:	95 (A)	385 (B)
Prevalence Index = B/A =		4.0526

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

No 3 - Prevalence Index is ≤3.0<sup>1</sup>

4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

5 - Wetland Non-Vascular Plants<sup>1</sup>

6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☐ No ☒ X

Remarks: Sample point dominated by FACU vegetation.

SOIL							Sampling Point: SP 03-1	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10 YR 5/2	100					Sandy loam	
2-4	10 YR 5/3	98	5 YR 5/6	2	C	PL	Sandy loam	
			<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.					
			<sup>2</sup> Location: PL=Pore Lining, M=Matrix.					
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: <u>Roadside</u>						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Depth (inches): <u>4</u>								
<b>Remarks:</b> Soil point lacks hydric soil indicators, redox concentrations are present however there is only 2% redox and the matrix does not satisfy any hydric soil indicators.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>          </u>		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Water Table Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>          </u>					
Saturation Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>          </u>					
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/21/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: SP 04-1 Feature ID: W03-1  
 Investigator(s): M. Oats, J. Ahn Section, Township, Range: 28, T46N, R14E  
 Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 41.79365 Long: -120.36784 Datum: NAD83  
 Soil Map Unit Name: (135) Drews gravelly loam, 0 to 9 percent slopes NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☒ No ☐  
 Hydric Soil Present? Yes ☒ No ☐  
 Wetland Hydrology Present? Yes ☒ No ☐

Is the Sampled Area within a Wetland? Yes ☒ No ☐

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour: \_\_\_\_\_ OHWM Mapped: \_\_\_\_\_  
 Feature Designation: Perennial: \_\_\_\_\_ Intermittent: \_\_\_\_\_ Ephemeral: \_\_\_\_\_  
 Natural Drainage: \_\_\_\_\_ Artificial Drainage: \_\_\_\_\_ Navigable Water: \_\_\_\_\_

Remarks: Wetland parameters are present as indicated by hydrology indicator (drift deposits), hydric soils (F3), and a dominance of hydrophytic vegetation.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)				
1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
1	Sallas2 Salix lasiolepis	50	YES	FACW
2				
3				
4				
5				
		50	= Total Cover	

Herb Stratum (Plot size: 5' radius)	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
1	Carneb Carex nebrascensis	35	YES	OBL
2	Phaar Phalaris arundinacea	30	YES	FACW
3	Rumcr Rumex crispus	5	NO	FAC
4	Epici Epilobium ciliatum	10	NO	FACW
5	Lacser Lactuca serriola	10	NO	FACU
6				
7				
8				
9				
10				
11				
		90	= Total Cover	

Woody Vine Stratum (Plot size: _____)	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
1				
2				
		0	= Total Cover	

% Bare Ground in Herb 10 % Cover of Biotic \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species 35	x 1 =	35
FACW species 90	x 2 =	180
FAC species 5	x 3 =	15
FACU species 10	x 4 =	40
UPL species 0	x 5 =	0
Column Totals: 140 (A)		270 (B)
Prevalence Index = B/A =		1.9286

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation  
 Yes 2 - Dominance Test is >50%  
 Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☒ No ☐

Remarks: Feature dominated by hydrophytic vegetation (FACW and OBL species).



SOIL							Sampling Point:		SP 04-1	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Matrix		Redox Features							
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
0-10	10 YR 4/1	95	5 YR 5/8	5	C	PL	Sandy clay loam	Prominent redox concentrations		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.				
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)										
Histosol (A1) _____ Sandy Redox (S5) _____			Indicators for Problematic Hydric Soils <sup>3</sup> :							
Histic Epipedon (A2) _____ Stripped Matrix (S6) _____			_____ 1 cm Muck (A9) ( <b>LRR C</b> )							
Black Histic (A3) _____ Loamy Mucky Mineral (F1) _____			_____ 2 cm Muck (A10) ( <b>LRR B</b> )							
Hydrogen Sulfide (A4) _____ Loamy Gleyed Matrix (F2) _____			_____ Reduced Vertic (F18)							
Stratified Layers (A5) ( <b>LRR C</b> ) _____ X Depleted Matrix (F3) _____			_____ Red Parent Material (TF2)							
1 cm Muck (A9) ( <b>LRR D</b> ) _____ Redox Dark Surface (F6) _____			_____ Other (Explain in Remarks)							
Depleted Below Dark Surface (A11) _____ Depleted Dark Surface (F7) _____										
Thick Dark Surface (A12) _____ Redox Depressions (F8) _____										
Sandy Mucky Mineral (S1) _____ Vernal Pools (F9) _____										
Sandy Gleyed Matrix (S4) _____										
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.										
Restrictive Layer (if present):						Hydric Soil Present?				
Type: _____ Rock, shovel refusal						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Depth (inches): _____ 10										
Remarks: Hydric soil indicators are observed and meet indicator F3 Depleted Matrix, with a soil that is at least 6 inches thick starting in the top 10 inches of soil surface, with redox concentrations (soft masses or pore linings), in a matrix with a value of 4 or more and chroma of 2 or less.										
HYDROLOGY										
Wetland Hydrology Indicators:						Secondary Indicators (2 or more required)				
Primary Indicators (minimum of one required; check all that apply)						Water Marks (B1) ( <b>Riverine</b> )				
Surface Water (A1) _____ Salt Crust (B11) _____						_____ Sediment Deposits (B2) ( <b>Riverine</b> )				
High Water Table (A2) _____ Biotic Crust (B12) _____						_____ Drift Deposits (B3) ( <b>Riverine</b> )				
Saturation (A3) _____ Aquatic Invertebrates (B13) _____						X Drainage Patterns (B10)				
Water Marks (B1) ( <b>Nonriverine</b> ) _____ Hydrogen Sulfide Odor (C1) _____						_____ Dry-Season Water Table (C2)				
Sediment Deposits (B2) ( <b>Nonriverine</b> ) _____ Oxidized Rhizospheres along Living Roots (C3) _____						_____ Crayfish Burrows (C8)				
X Drift Deposits (B3) ( <b>Nonriverine</b> ) _____ Presence of Reduced Iron (C4) _____						_____ Saturation Visible on Aerial Imagery (CS)				
Surface Soil Cracks (B6) _____ Recent Iron Reduction in Tilled Soils (C6) _____						_____ Shallow Aquitard (D3)				
Inundation Visible on Aerial Imagery (B7) _____ Thin Muck Surface (C7) _____						X FAC-Neutral Test (D5)				
Water-Stained Leaves (B9) _____ Other (Explain in Remarks)										
Field Observations:						Wetland Hydrology Present?				
Surface Water Present? Yes _____ No X Depth (inches): _____						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Water Table Present? Yes _____ No X Depth (inches): _____										
Saturation Present? Yes _____ No X Depth (inches): _____										
(includes capillary fringe)										
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:										
Remarks: Hydrology indicators present as evidenced by drift deposits, drainage patterns, and FAC-neutral test.										

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/21/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point SP 05-1 Feature ID: U03-1  
 Investigator(s): M. Oats, J. Ahn Section, Township, Range: 28, T46N, R14E  
 Local relief (hillside, terrace, etc.): Roadside slope Local Relief (concave, convex, none): Convex Slope (%): 20  
 Subregion (LRR): D Lat: 41.79369 Long: -120.36791 Datum: NAD83  
 Soil Map Unit Name: (135) Drews gravelly loam, 0 to 9 percent slopes NWI classification None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? ☐ Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? ☐ (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☐ No ☒  
 Hydric Soil Present? Yes ☐ No ☒  
 Wetland Hydrology Present? Yes ☐ No ☒

Is the Sampled Area within a Wetland? Yes ☐ No ☒

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour \_\_\_\_\_ OHWM Mapped \_\_\_\_\_  
 Feature Designation: Perennial \_\_\_\_\_ Intermittent \_\_\_\_\_ Ephemeral \_\_\_\_\_  
 Natural Drainage \_\_\_\_\_ Artificial Drainage \_\_\_\_\_ Navigable Water \_\_\_\_\_

Remarks: Sample point lacks all indicators of wetland parameters. Upland pair point to W03-1.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30' radius</u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>15' radius</u> )				
1				
2				
3				
4				
5				
		<u>0</u>	= Total Cover	

Herb Stratum (Plot size: <u>5' radius</u> )				
1	<u>Lacser</u>	<u>Lactuca serriola</u>	<u>10</u>	<u>YES</u> <u>FACU</u>
2	<u>Alysim</u>	<u>Alyssum simplex</u>	<u>20</u>	<u>YES</u> <u>UPL</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>30</u>	= Total Cover	

Woody Vine Stratum (Plot size: _____)				
1				
2				
		<u>0</u>	= Total Cover	

% Bare Ground in Herb 70 % Cover of Biotic \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species	<u>0</u> x 1 =	<u>0</u>
FACW species	<u>0</u> x 2 =	<u>0</u>
FAC species	<u>0</u> x 3 =	<u>0</u>
FACU species	<u>10</u> x 4 =	<u>40</u>
UPL species	<u>20</u> x 5 =	<u>100</u>
Column Totals:	<u>30</u> (A)	<u>140</u> (B)
Prevalence Index = B/A =		<u>4.6667</u>

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

No 3 - Prevalence Index is ≤3.0<sup>1</sup>

4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

5 - Wetland Non-Vascular Plants<sup>1</sup>

6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☐ No ☒

Remarks: Sample point dominated by FACU and UPL vegetation.

SOIL						Sampling Point	SP 05-1	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features			Texture	Remarks	
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			Loc <sup>2</sup>
0-4	10 YR 4/4	100					Sandy loam	Roadfill throughout
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: <u>Compacted roadbase</u> Depth (inches): <u>4</u>						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Soil point lacks hydric soil indicators, roadside sample point at wetland boundary full of roadfill in sample point.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Depth (inches): <u>          </u>			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Depth (inches): <u>          </u>					
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Depth (inches): <u>          </u>					
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/22/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: SP 08-1 Feature ID: W04-1c  
 Investigator(s): M. Oats, J. Ahn Section, Township, Range: 11, T47N, R14E  
 Local relief (hillside, terrace, etc.): Depression/Roadside Swale Local Relief (concave, convex, none): Concave Slope (%): 3  
 Subregion (LRR): D Lat: 41.93548 Long: -120.31899 Datum: NAD83  
 Soil Map Unit Name: (176) Pit silty clay loam, 0 to 2 percent slopes NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? ☐ Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? ☐ (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☒ No ☐  
 Hydric Soil Present? Yes ☒ No ☐  
 Wetland Hydrology Present? Yes ☒ No ☐  
 Is the Sampled Area within a Wetland? Yes ☒ No ☐

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour \_\_\_\_\_ OHWM Mapped \_\_\_\_\_  
 Feature Designation: Perennial \_\_\_\_\_ Intermittent \_\_\_\_\_ Ephemeral \_\_\_\_\_  
 Natural Drainage \_\_\_\_\_ Artificial Drainage \_\_\_\_\_ Navigable Water \_\_\_\_\_

Remarks: Wetland parameters are present as indicated by hydrology indicator (water stained leaves), hydric soils (F3), and a dominance of hydrophytic vegetation.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)				
1				
2				
3				
4				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: 15' radius)				
1	Salexi Salix exigua	30	YES	FACW
2				
3				
4				
5				
		30	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5' radius)				
1	Phaar Phalaris arundinacea	70	YES	FACW
2	Junbal Juncus balticus	30	YES	FACW
3				
4				
5				
6				
7				
8				
9				
10				
11				
		100	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

% Bare Ground in Herb  0 % Cover of Biotic

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC:  3 (A)

Total Number of Dominant Species Across All Strata:  3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC:  1 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species	0	x 1 = 0
FACW species	130	x 2 = 260
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	130 (A)	260 (B)
Prevalence Index = B/A =		<input type="text"/> 2

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation  
 Yes 2 - Dominance Test is >50%  
 Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☒ No ☐

Remarks: Hydrophytic vegetation present as indicated by a dominance of FACW species.

SOIL							Sampling Point: SP 08-1	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-1	10 YR 4/4	100					Sandy clay loam	Prominent redox concentrations
1-16	2.5 YR 4/1	95	5 YR 5/8	5	C	M	Clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)					
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)					
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input checked="" type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: <input type="text" value="None"/>						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Depth (inches): <input type="text" value="None"/>								
<b>Remarks:</b> Hydric soil indicators are observed and meet indicators of F3 Depleted Matrix, with indicators of a soil that is at least 6 inches thick starting in the top 10 inches of soil surface, with redox concentrations (soft masses or pore linings), in a matrix with a value of 4 or more and chroma of 2 or less.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input checked="" type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text" value="0"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Water Table Present?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text" value="0"/>			
Saturation Present?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text" value="0"/>			
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicators present as evidenced by water stained leaves, and secondary indicators of drainage patterns and FAC-neutral test.								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/22/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point SP 09-1 Feature ID: U04-1  
 Investigator(s): M. Oats, J. Ahn Section, Township, Range: 11, T47N, R14E  
 Local relief (hillside, terrace, etc.): Roadside slope Local Relief (concave, convex, none): Convex Slope (%): 5  
 Subregion (LRR): D Lat: 41.93544 Long: -120.31905 Datum: NAD83  
 Soil Map Unit Name: (176) Pit silty clay loam, 0 to 2 percent slopes NWI classification None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? ☐ Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation No, Soil No, or Hydrology No naturally problematic? ☐ (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☐ No ☒  
 Hydric Soil Present? Yes ☐ No ☒  
 Wetland Hydrology Present? Yes ☐ No ☒

Is the Sampled Area within a Wetland? Yes ☐ No ☒

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour \_\_\_\_\_ OHWM Mapped \_\_\_\_\_  
 Feature Designation: Perennial \_\_\_\_\_ Intermittent \_\_\_\_\_ Ephemeral \_\_\_\_\_  
 Natural Drainage \_\_\_\_\_ Artificial Drainage \_\_\_\_\_ Navigable Water \_\_\_\_\_

Remarks: Sample point lacks all indicators of wetland parameters. Upland pair point to W04-1.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30' radius</u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: <u>15' radius</u> )			
1			
2			
3			
4			
5			
		<u>0</u>	= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>5' radius</u> )				
1 <u>THIINT</u>	<u>Thinopyrum intermedium</u>	<u>90</u>	<u>YES</u>	<u>UPL</u>
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>90</u>	= Total Cover	

Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: _____)			
1			
2			
		<u>0</u>	= Total Cover

% Bare Ground in Herb 10 % Cover of Biotic \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>90</u>	x 5 =	<u>450</u>
Column Totals: <u>90</u> (A)		<u>450</u> (B)
Prevalence Index = B/A =		<u>5</u>

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

No 3 - Prevalence Index is ≤3.0<sup>1</sup>

4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

5 - Wetland Non-Vascular Plants<sup>1</sup>

6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☐ No ☒

Remarks: Sample point dominated by upland vegetation.



## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/22/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: SP 12-1 Feature ID: W06-1  
 Investigator(s): M. Oats, J. Ahn Section, Township, Range: 36, T48N, R14E  
 Local relief (hillside, terrace, etc.): Terrace Local Relief (concave, convex, none): Convex Slope (%): 1  
 Subregion (LRR): D Lat: 41.95703 Long: -120.30909 Datum: NAD83  
 Soil Map Unit Name: (133) Donica gravelly clay loam, 2 to 9 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☒ No ☐  
 Hydric Soil Present? Yes ☒ No ☐  
 Wetland Hydrology Present? Yes ☒ No ☐  
 Is the Sampled Area within a Wetland? Yes ☒ No ☐

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour: \_\_\_\_\_ OHWM Mapped: \_\_\_\_\_  
 Feature Designation: Perennial: \_\_\_\_\_ Intermittent: \_\_\_\_\_ Ephemeral: \_\_\_\_\_  
 Natural Drainage: \_\_\_\_\_ Artificial Drainage: \_\_\_\_\_ Navigable Water: \_\_\_\_\_

**Remarks:** Wetland parameters are present as indicated by hydrology indicator (high water table and saturation), hydric soils (F3), and a dominance of hydrophytic vegetation.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)				
1				
2				
3				
4				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: 15' radius)				
1	Salexi Salix exigua	60	YES	FACW
2	Roscal Rosa californica	15	YES	FAC
3				
4				
5				
		75	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5' radius)				
1	Carneb Carex nebrascensis	25	YES	OBL
2	Menarv Mentha arvensis	10	NO	FACW
3	Phaarv Phalaris arundinacea	35	YES	FACW
4				
5				
6				
7				
8				
9				
10				
11				
		70	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

% Bare Ground in Herb 30 % Cover of Biotic \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species 25	x 1 =	25
FACW species 105	x 2 =	210
FAC species 15	x 3 =	45
FACU species 0	x 4 =	0
UPL species 0	x 5 =	0
Column Totals: 145	(A)	280
Prevalence Index = B/A =		1.931

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation  
 Yes 2 - Dominance Test is >50%  
 Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☒ No ☐

**Remarks:** Hydrophytic vegetation present as indicated by a dominance of FAC, FACW, and OBL species.



SOIL							Sampling Point: SP 12-1	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10 YR 4/1	95	7.5 YR 4/6	5	C	M	Sandy clay loam	Prominent redox concentrations

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soil Indicators:</b> (Applicable to all LRRs, unless otherwise noted.)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>  ____ 1 cm Muck (A9) ( <b>LRR C</b> ) ____ 2 cm Muck (A10) ( <b>LRR B</b> ) ____ Reduced Vertic (F18) ____ Red Parent Material (TF2) ____ Other (Explain in Remarks)
____ Histosol (A1)	____ Sandy Redox (S5)		
____ Histic Epipedon (A2)	____ Stripped Matrix (S6)		
____ Black Histic (A3)	____ Loamy Mucky Mineral (F1)		
____ Hydrogen Sulfide (A4)	____ Loamy Gleyed Matrix (F2)		
____ Stratified Layers (A5) ( <b>LRR C</b> )	X Depleted Matrix (F3)		
____ 1 cm Muck (A9) ( <b>LRR D</b> )	____ Redox Dark Surface (F6)		
____ Depleted Below Dark Surface (A11)	____ Depleted Dark Surface (F7)		
____ Thick Dark Surface (A12)	____ Redox Depressions (F8)		
____ Sandy Mucky Mineral (S1)	____ Vernal Pools (F9)		
____ Sandy Gleyed Matrix (S4)			

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if present):</b>		<b>Hydric Soil Present?</b>	
Type: _____ Hard rock			
Depth (inches): _____ 8		Yes [X]	No [ ]

Remarks: Hydric soil indicators are observed and meet indicators of F3 Depleted Matrix, with indicators of a soil that is at least 6 inches thick starting in the top 10 inches of soil surface, with redox concentrations (soft masses or pore linings), in a matrix with a value of 4 or more and chroma of 2 or less.

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (2 or more required)</b>
Primary Indicators (minimum of one required; check all that apply)		_____ Water Marks (B1) ( <b>Riverine</b> )
_____ Surface Water (A1)	_____ Salt Crust (B11)	_____ Sediment Deposits (B2) ( <b>Riverine</b> )
X High Water Table (A2)	_____ Biotic Crust (B12)	_____ Drift Deposits (B3) ( <b>Riverine</b> )
X Saturation (A3)	_____ Aquatic Invertebrates (B13)	X Drainage Patterns (B10)
_____ Water Marks (B1) ( <b>Nonriverine</b> )	_____ Hydrogen Sulfide Odor (C1)	_____ Dry-Season Water Table (C2)
_____ Sediment Deposits (B2) ( <b>Nonriverine</b> )	_____ Oxidized Rhizospheres along Living Roots (C3)	_____ Crayfish Burrows (C8)
_____ Drift Deposits (B3) ( <b>Nonriverine</b> )	_____ Presence of Reduced Iron (C4)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Surface Soil Cracks (B6)	_____ Recent Iron Reduction in Tilled Soils (C6)	_____ Shallow Aquitard (D3)
_____ Insundation Visible on Aerial Imagery (B7)	_____ Thin Muck Surface (C7)	X FAC-Neutral Test (D5)
_____ Water-Stained Leaves (B9)	Other (Explain in Remarks)	

<b>Field Observations:</b>				<b>Wetland Hydrology Present?</b>	
Surface Water Present? Yes _____ No X	Depth (inches): _____ 0				
Water Table Present? Yes X No _____	Depth (inches): _____ 1				
Saturation Present? Yes X No _____	Depth (inches): _____ 1				
(includes capillary fringe)				Yes [X] No [ ]	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Hydrology indicators present as evidenced by high water table and saturation, and secondary indicators of drainage patterns and FAC-neutral test.

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/22/2019

Applicant/Owner: Zayo Group State: California Sampling Point: SP 13-1 Feature ID: U06-1

Investigator(s): M. Oats, J. Ahn Section, Township, Range: 36, T48N, R14E

Local relief (hillside, terrace, etc.): Terrace Local Relief (concave, convex, none): Convex Slope (%): 1

Subregion (LRR): D Lat: 41.95706 Long: -120.30911 Datum: NAD83

Soil Map Unit Name: (133) Donica gravelly clay loam, 2 to 9 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? ☐ Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? ☐ (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☐ No ☒ x

Hydric Soil Present? Yes ☒ x No ☐

Wetland Hydrology Present? Yes ☐ No ☒ x

Is the Sampled Area within a Wetland? Yes ☐ No ☒ x

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_

Indicators: Defined bed and bank: \_\_\_\_\_ Scour: \_\_\_\_\_ OHWM Mapped: \_\_\_\_\_

Feature Designation: Perennial: \_\_\_\_\_ Intermittent: \_\_\_\_\_ Ephemeral: \_\_\_\_\_

Natural Drainage: \_\_\_\_\_ Artificial Drainage: \_\_\_\_\_ Navigable Water: \_\_\_\_\_

**Remarks:** Sample point lacks hydrology and hydrophytic vegetation wetland parameters. Hydric soil indicators are present but soil also contains roadfill. Upland pair point to W06-1.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)				
1				
2				
3				
4				
		0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)				
1	Salexi Salix exigua	10	YES	FACW
2				
3				
4				
5				
		10	= Total Cover	
Herb Stratum (Plot size: 5' radius)				
1	THINT Thinopyrum intermedium	70	YES	UPL
2	Lacser Lactuca serriola	20	YES	FACU
3	Phaar Phalaris arundinacea	5	NO	FACW
4				
5				
6				
7				
8				
9				
10				
11				
		95	= Total Cover	
Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

% Bare Ground in Herb ☐ 5 % Cover of Biotic ☐

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: ☐ 1 (A)

Total Number of Dominant Species Across All Strata: ☐ 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ☐ 0.3333 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <input type="checkbox"/> 0	x 1 = <input type="checkbox"/> 0
FACW species <input type="checkbox"/> 15	x 2 = <input type="checkbox"/> 30
FAC species <input type="checkbox"/> 0	x 3 = <input type="checkbox"/> 0
FACU species <input type="checkbox"/> 20	x 4 = <input type="checkbox"/> 80
UPL species <input type="checkbox"/> 70	x 5 = <input type="checkbox"/> 350
Column Totals: <input type="checkbox"/> 105 (A)	<input type="checkbox"/> 460 (B)
Prevalence Index = B/A = <input type="checkbox"/> 4.381	

**Hydrophytic Vegetation Indicators:**

- 1 - Rapid Test for Hydrophytic Vegetation
- No 2 - Dominance Test is >50%
- No 3 - Prevalence Index is ≤3.0<sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants<sup>1</sup>
- 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☐ No ☒ X

**Remarks:** Sample point dominated by FACW, FACU, and UPL vegetation.

SOIL						Sampling Point: SP 13-1		
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10 YR 4/2	90	7.5 YR 5/6	10	C	M	Sandy loam	Roadfill throughout
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<b>Restrictive Layer (if present):</b> Type: <u>Roadside/ shovel refusal</u> Depth (inches): <u>4</u>						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Soil point does have hydric soil indicators, F3, but also is within roadside sample point at wetland boundary full of roadfill in sample point.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)						Secondary Indicators (2 or more required)		
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </u> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </u> (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Sampling Point: 52-1

Feature ID: W50-1

Project/Site: Zayo Fiberoptic Interconnect Project

City/County: Modoc

Sampling Date: 8/22/2019

Applicant/Owner: Zayo Group

State: California

Investigator(s): P. Ferral, M. Williams

Section, Township, Range: 25, T47N, R14E

Local relief (hillside, terrace, etc.): Hillside, toeslope

Local Relief (concave, convex, none): Concave

Slope (%): 15

Subregion (LRR): D

Lat: 41.9733

Long: -120.30155

Datum: NAD 83

Soil Map Unit Name: (138) Drews clay loam, wet, 0 to 2 percent slopes

NW1 classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? ☐ No Are "Normal Circumstances" present? Yes ☒ No ☐Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? ☐ No (If needed, explain any answers in Remarks.)**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**Hydrophytic Vegetation Present? Yes ☒ No ☐Hydric Soil Present? Yes ☒ No ☐Wetland Hydrology Present? Yes ☒ No ☐Is the Sampled Area  
within a Wetland?Yes ☒ No ☐**Remarks:** Hydrophytic vegetation observed, hydric soil indicators observed, hydrology indicators observed. All three criteria met indicating area is a wetland.**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 15' radius)				
1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)				
1				
2				
3				
4				
5				
		0	= Total Cover	

Herb Stratum	(Plot size: 5' radius )			
1 Phaar <u>u</u>	Phalaris arundinacea	30	YES	FACW
2 Alopra	Alopecurus pratensis	70	YES	FACW
3				
4				
5				
6				
7				
8				
9				
10				
11				
		100	= Total Cover	

Woody Vine Stratum	(Plot size: 5' radius)				
1					
2					
			0	= Total Cover	

%Bare Ground in Herb

% Cover of Biotic

Stratum: 0

Crust: 0

**Dominance Test worksheet:**

Number of Dominant Species

That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant

Species Across All Strata: 2 (B)

Percent of Dominant Species

That Are OBL, FACW, or FAC: 100% (A/B)

**Prevalence Index worksheet:**

Total % Cover of: Multiply by:

OBL species 0 x 1 = 0

FACW species 100 x 2 = 200

FAC species 0 x 3 = 0

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 100 (A) 200 (B)

Prevalence Index = B/A = 2

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is &gt;50%

Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)5 - Wetland Non-Vascular Plants<sup>1</sup>6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.**Hydrophytic  
Vegetation  
Present?**Yes ☒ No ☐**Remarks:** Hydrophytic vegetation observed by a dominance of FACW vegetation.

SOIL		Sampling Point: 52-1						
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	10YR 2/2	100					Loamy clay	
3-5	10YR 2/2	100					Clay	
5-16	10YR 2/1	95	2.5YR3/4	5	C	M	Clay	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)								
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)		Indicators for Problematic Hydric Soils <sup>3</sup> :					
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> 1 cm Muck (A9) (LRR C)					
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		<input type="checkbox"/> 2 cm Muck (A10) (LRR B)					
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Reduced Vertic (F18)					
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Red Parent Material (TF2)					
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)		<input type="checkbox"/> Other (Explain in Remarks)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)							
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
Restrictive Layer (if present):					Hydric Soil Present?			
Type: <input type="text"/> None					Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Depth (inches): <input type="text"/> N/A								
Remarks: Hydric soil indicator Redox Dark Surface observed.								
HYDROLOGY								
Wetland Hydrology Indicators:					Secondary Indicators (2 or more required)			
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) (Riverine)					
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) (Riverine)					
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) (Riverine)					
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)					
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)					
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)					
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)					
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)					
Field Observations:					Wetland Hydrology Present?			
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>					
Saturation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>					
(includes capillary fringe)								
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks: Hydrology indicators are present as displayed by water-stained leaves and the secondary indicator of FAC-Neutral test.								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Sampling Point: 53-1

Feature ID: U50-1

Project/Site: Zayo Fiberoptic Interconnect Project

City/County: Modoc

Sampling Date: 8/20/2019

Applicant/Owner: Zayo Group

State: California

Investigator(s): P. Ferral, M. Williams

Section, Township, Range: 25, T47N, R14E

Local relief (hillside, terrace, etc.): Hillside

Local Relief (concave, convex, none): Concave

Slope (%): 15

Subregion (LRR): D

Lat: 41.97332

Long: -120.30164

Datum: NAD 83

Soil Map Unit Name: (138) Drews clay loam, wet, 0 to 2 percent slopes

NW1 classification:

None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? ☐ No Are "Normal Circumstances" present? Yes ☒ No ☐Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? ☐ No (If needed, explain any answers in Remarks.)**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**Hydrophytic Vegetation Present? Yes ☐ No ☒Hydric Soil Present? Yes ☐ No ☒Wetland Hydrology Present? Yes ☐ No ☒Is the Sampled Area  
within a Wetland?Yes ☐ No ☒**Remarks:** Hydrology indicators not observed, hydrophytic vegetation not observed, and hydric soil indicators not observed. All three criteria not met. Area is not a wetland.**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 15' radius)				
1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)				
1				
2				
3				
4				
5				
		0	= Total Cover	

Herb Stratum	(Plot size: 5' radius )			
1 Brotec	Bromus tectorum	5	YES	UPL
2 Lacser	Lactuca serriola	5	YES	FACU
3				
4				
5				
6				
7				
8				
9				
10				
11				
		10	= Total Cover	

Woody Vine Stratum	(Plot size: _____)	_____	_____	_____	_____
1	_____	_____	_____	_____	_____
2	_____	_____	_____	_____	_____
		0	= Total Cover		

%Bare Ground in Herb

% Cover of Biotic

Stratum: 90

Crust: 0

**Dominance Test worksheet:**

Number of Dominant Species

That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant

Species Across All Strata: 2 (B)

Percent of Dominant Species

That Are OBL, FACW, or FAC: 0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of: Multiply by:

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 5 x 4 = 20

UPL species 5 x 5 = 25

Column Totals: 10 (A) 45 (B)

Prevalence Index = B/A = 4.5

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is &gt;50%

No 3 - Prevalence Index is ≤3.0<sup>1</sup>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)5 - Wetland Non-Vascular Plants<sup>1</sup>6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.**Hydrophytic  
Vegetation  
Present?**Yes ☐ No ☒**Remarks:** Hydrophytic vegetation not observed.

SOIL		Sampling Point: 53-1					
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>		
							Roadside gravel
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.							
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>							
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>				
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )				
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )				
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Reduced Vertic (F18)				
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )	<input type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Red Parent Material (TF2)				
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )	<input type="checkbox"/> Redox Dark Surface (F6)		<input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)						
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)						
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)						
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
<b>Restrictive Layer (if present):</b>					<b>Hydric Soil Present?</b>		
Type: <input type="checkbox"/> Compacted road base associated with Highway 395					Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Depth (inches): <input type="checkbox"/> Surface							
<b>Remarks:</b> Hydric soil indicators not observed. Roadside gravel fill, no soil pit.							
<b>HYDROLOGY</b>							
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)					Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )				
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )				
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> FAC-Neutral Test (D5)				
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)						
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>		
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="checkbox"/>				
Saturation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="checkbox"/>				
(includes capillary fringe)							
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>							
<b>Remarks:</b> Hydrology indicators not observed.							

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Sampling Point: 100-1

Feature ID: W100-1

Project/Site: Zayo Fiberoptic Interconnect Project

City/County: Modoc County

Sampling Date: 8/21/2019

Applicant/Owner: Zayo Group

State: California

Investigator(s): T. Kayatsky, Z. Buecker

Section, Township, Range: 21, T46N, R14E

Local relief (hillside, terrace, etc.): Roadside depression

Local Relief (concave, convex, none): Concave

Slope (%): 2

Subregion (LRR): D

Lat: 41.81329

Long: -120.35459

Datum: NAD 83

Soil Map Unit Name: (148) Kinkel loam, 2 to 15 percent slopes

NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed?Are "Normal Circumstances" present? Yes ☒ No ☐Are Vegetation ☐ No, Soil ☒ Yes, or Hydrology ☐ No naturally problematic?

(If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**Hydrophytic Vegetation Present? Yes ☒ No ☐Hydric Soil Present? Yes ☒ No ☐Wetland Hydrology Present? Yes ☒ No ☐Is the Sampled Area  
within a Wetland?Yes ☒ No ☐**Remarks:** Two wetland parameters observed (Dominance of hydrophytic vegetation and hydrology). PEM/PSS wetland. Salix and carex dominated. Soils fall under problematic hydric soils.**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0		= Total Cover

Sapling/Shrub Stratum (Plot size: 30 ft x 30 ft)			Total Cover		
1	Sallasi	Salix lasiolepis	50	YES	FACW
2					
3					
4					
5					
			50	= Total Cover	

Herb Stratum	(Plot size: _____)			
1 Alopra	Alopecurus pratensis	15	YES	FACW
2 Poapra	Poa pratensis	5	NO	FAC
3 Carsub2	Carex subfusca	30	YES	FAC
4 Descae	Deschampsia caespitosa	20	YES	FACW
5				
6				
7				
8				
9				
10				
11				
		70	= Total Cover	

Woody Vine Stratum (Plot size: _____)				
1				
2				
			0	= Total Cover

%Bare Ground in Herb

% Cover of Biotic

Stratum: \_\_\_\_\_

Crust: \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species

That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant

Species Across All Strata: 4 (B)

Percent of Dominant Species

That Are OBL, FACW, or FAC: 100% (A/B)

**Prevalence Index worksheet:**

Total % Cover of: Multiply by:

OBL species 0 x 1 = 0

FACW species 85 x 2 = 170

FAC species 35 x 3 = 105

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 120 (A) 275 (B)

Prevalence Index = B/A = 2.2917

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is &gt;50%

Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)5 - Wetland Non-Vascular Plants<sup>1</sup>6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.**Hydrophytic  
Vegetation**

Present?

Yes ☒ No ☐**Remarks:** Hydrophytic vegetation dominant and observed in shrub and herb layers.



<b>SOIL</b>							Sampling Point: 100-1	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR 2/1	100					Loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input checked="" type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: <u>Compacted Gravel</u>								
Depth (inches): <u>5</u>						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Refusal at 5" due to compacted gravel. Soil profile observed did not have hydric soil indicators; however, soils are assumed hydric and problematic due to low chroma potentially obscuring redox features, and strong vegetation and hydrology indicators observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input checked="" type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input checked="" type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>						
Water Table Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>						
Saturation Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>						
(includes capillary fringe)						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Wetland hydrology indicators observed: drift deposits, drainage patterns, and passing FAC-neutral test.								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Sampling Point: 101-1

Feature ID: U100-1

Project/Site: Zayo Fiberoptic Interconnect Project

City/County: Modoc County

Sampling Date: 8/21/2019

Applicant/Owner: Zayo Group

State: California

Investigator(s): T. Kayatsky, Z. Buecker

Section, Township, Range: 21, T46N, R14E

Local relief (hillside, terrace, etc.): Roadside slope

Local Relief (concave, convex, none): Convex

Slope (%): 2

Subregion (LRR): D Lat: 41.8133

Long: -120.3546

Datum: NAD 83

Soil Map Unit Name: (148) Kinkel loam, 2 to 15 percent slopes

NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? ☐ Are "Normal Circumstances" present? Yes ☒ No ☐Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? ☐ (If needed, explain any answers in Remarks.)**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**Hydrophytic Vegetation Present? Yes ☐ No ☒Hydric Soil Present? Yes ☐ No ☒Wetland Hydrology Present? Yes ☐ No ☒Is the Sampled Area  
within a Wetland?Yes ☐ No ☒**Remarks:** Upland pair point to W100-1; dominated by rubber rabbitbrush. No wetland parameters were observed.**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER**3/3 Abbrev. Species Name Absolute Dominant Indicator  
Tree Stratum (Plot size: ) % Cover Species? Status

1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: )

1				
2				
3				
4				
5				
		0	= Total Cover	

Herb Stratum (Plot size: 1 m x 1 m)

1	ARTLUD	Artemisia ludoviciana	15	YES	FACU
2	Poapra	Poa pratensis	20	YES	FAC
3	Brotec	Bromus tectorum	10	NO	UPL
4	Carsub2	Carex subfusca	5	NO	FAC
5	Elytri	Elymus triticoides	3	NO	UPL
6	Epibra	Epilobium brachycarpum	7	NO	UPL
7	Lacser	Lactuca serriola	2	NO	FACU
8					
9					
10					
11					
		62	= Total Cover		

Woody Vine Stratum (Plot size: )

1				
2				
		0	= Total Cover	

%Bare Ground in Herb

% Cover of Biotic

Stratum: 5

Crust:

**Dominance Test worksheet:**Number of Dominant Species  
That Are OBL, FACW, or FAC: 1 (A)Total Number of Dominant  
Species Across All Strata: 2 (B)Percent of Dominant Species  
That Are OBL, FACW, or FAC: 50% (A/B)**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	25	x 3 = 75
FACU species	17	x 4 = 68
UPL species	20	x 5 = 100
Column Totals:	62 (A)	243 (B)
Prevalence Index = B/A =		3.9194

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is &gt;50%

No 3 - Prevalence Index is ≤3.0<sup>1</sup>4 - Morphological Adaptations<sup>1</sup> (Provide supporting  
data in Remarks or on a separate sheet)5 - Wetland Non-Vascular Plants<sup>1</sup>6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)<sup>1</sup> Indicators of hydric soil and wetland hydrology must  
be present unless disturbed or problematic.**Hydrophytic  
Vegetation  
Present?**Yes ☐ No ☒**Remarks:** Area was not dominated by hydrophytic vegetation and did not pass the prevalence index test.

[illegible]

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Sampling Point: 103-1

Feature ID: W101-1

Project/Site: Zayo Fiberoptic Interconnect Project

City/County: Modoc County

Sampling Date: 8/22/2019

Applicant/Owner: Zayo Group

State: California

Investigator(s): T. Kayatsky, Z. Buecker

Section, Township, Range: 16, T46N, R14E

Local relief (hillside, terrace, etc.): Hillside

Local Relief (concave, convex, none): Convex

Slope (%): 35

Subregion (LRR): D

Lat: 41.82859

Long: -120.35363

Datum: NAD 83

Soil Map Unit Name: (159) Lorella cobbly clay loam, 30 to 50 percent slopes

NW1 classification: PSSE

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)Are Vegetation ☐ No, Soil ☒ Yes, or Hydrology ☐ No significantly disturbed? ☐ Are "Normal Circumstances" present? Yes ☒ No ☐Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? ☐ (If needed, explain any answers in Remarks.)**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**Hydrophytic Vegetation Present? Yes ☒ No ☐Hydric Soil Present? Yes ☒ No ☐Wetland Hydrology Present? Yes ☒ No ☐Is the Sampled Area  
within a Wetland?Yes ☒ No ☐**Remarks:** Area was dominated by Juncus. All three wetland parameters were met, though soil was disturbed from roadside.**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: _____)				
1				
2				
3				
4				
5				
		0	= Total Cover	

Herb Stratum (Plot size: 1 m x 1 m)				
1 Mimgut	Mimulus guttatus	15	NO	OBL
2 Phaaru	Phalaris arundinacea	25	NO	FACW
3 Descae	Deschampsia caespitosa	5	NO	FACW
4 Junens	Juncus ensifolius	50	YES	FACW
5 Sallasi	Salix lasiolepis	15	NO	FACW
6 Junens	Juncus ensifolius	3	NO	FACW
7 Brotect	Bromus tectorum	10	NO	UPL
8 Carsub2	Carex subfusca	5	NO	FAC
9 Elepal	Eleocharis palustris	15	NO	OBL
10				
11				
		143	= Total Cover	

Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

%Bare Ground in Herb

% Cover of Biotic

Stratum: \_\_\_\_\_

Crust: \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species

That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant

Species Across All Strata: 1 (B)

Percent of Dominant Species

That Are OBL, FACW, or FAC: 100% (A/B)

**Prevalence Index worksheet:**

Total % Cover of: Multiply by:

OBL species 30 x 1 = 30

FACW species 98 x 2 = 196

FAC species 5 x 3 = 15

FACU species 0 x 4 = 0

UPL species 10 x 5 = 50

Column Totals: 143 (A) 291 (B)

Prevalence Index = B/A = 2.035

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is &gt;50%

Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)5 - Wetland Non-Vascular Plants<sup>1</sup>6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.**Hydrophytic  
Vegetation**

Present?

Yes ☒ No ☐**Remarks:** Feature dominated by hydrophytic vegetation. Salix were only shoots at time of survey.

SOIL							Sampling Point: 103-1				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>											
Depth (inches)	Matrix		Redox Features				Texture	Remarks			
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>					
0-3	10 yr 2/1	100					Sandy loam	With fine gravel			
3-6	10 yr 4/1	100					Sandy loam				
6-8	10 yr 3/1	100					Loam				
8-14	2.5 y 6/1	95	7.5 yr 5/8	5	C	P	Sandy clay loam	Fine gravel. Prominent redox concentrations			
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.											
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>											
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)					
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.											
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>					
Type: _____ Rock Depth (inches): _____ 14						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
<b>Remarks:</b> Hydric soil indicator observed; depleted matrix.											
<b>HYDROLOGY</b>											
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>					
Primary Indicators (minimum of one required; check all that apply)						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)					
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)						<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>					
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ 5 Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ 0 (includes capillary fringe)						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>											
<b>Remarks:</b> Wetland hydrology indicators observed; high water table and saturation within 12 inches of the soil surface.											

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Sampling Point: 104-1

Feature ID: U101-1

Project/Site: Zayo Fiberoptic Interconnect Project

City/County: Modoc County

Sampling Date: 8/22/2019

Applicant/Owner: Zayo Group

State: California

Investigator(s): T. Kayatsky, Z. Buecker

Section, Township, Range: 16, T46N, R14E

Local relief (hillside, terrace, etc.): Road slope

Local Relief (concave, convex, none): Convex

Slope (%): 15

Subregion (LRR): D Lat: 41.82859

Long: -120.35366

Datum: NAD 83

Soil Map Unit Name: (159) Lorella cobbly clay loam, 30 to 50 percent slopes

NW1 classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? ☐ Are "Normal Circumstances" present? Yes ☒ No ☐Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? ☐ (If needed, explain any answers in Remarks.)**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**Hydrophytic Vegetation Present? Yes ☒ No ☐Hydric Soil Present? Yes ☐ No ☒Wetland Hydrology Present? Yes ☐ No ☒Is the Sampled Area  
within a Wetland?Yes ☐ No ☒**Remarks:** Upland pair point to W101-1; dominated by Distichlis spicata (FAC), however soil and hydrology indicators were not observed.**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: _____)				
1				
2				
3				
4				
5				
		0	= Total Cover	

Herb Stratum (Plot size: 1 m x 1 m)				
1 Disspi	Distichlis spicata	5	YES	FAC
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		5	= Total Cover	

Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

%Bare Ground in Herb

% Cover of Biotic

Stratum: 95

Crust: \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species

That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant

Species Across All Strata: 1 (B)

Percent of Dominant Species

That Are OBL, FACW, or FAC: 100% (A/B)

**Prevalence Index worksheet:**

Total % Cover of: Multiply by:

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 5 x 3 = 15

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 5 (A) 15 (B)

Prevalence Index = B/A = 3

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is &gt;50%

3 - Prevalence Index is ≤3.0<sup>1</sup>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)5 - Wetland Non-Vascular Plants<sup>1</sup>6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.**Hydrophytic  
Vegetation  
Present?**Yes ☒ No ☐**Remarks:** Area was dominated by FAC species. Bare ground was gravel roadfill.

SOIL						Sampling Point:		104-1	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix		Redox Features				Texture	Remarks	
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>			
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)									
<input type="checkbox"/> Histosol (A1)		<input type="checkbox"/> Sandy Redox (S5)		Indicators for Problematic Hydric Soils <sup>3</sup> :					
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> 1 cm Muck (A9) (LRR C)					
<input type="checkbox"/> Black Histic (A3)		<input type="checkbox"/> Loamy Mucky Mineral (F1)		<input type="checkbox"/> 2 cm Muck (A10) (LRR B)					
<input type="checkbox"/> Hydrogen Sulfide (A4)		<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Reduced Vertic (F18)					
<input type="checkbox"/> Stratified Layers (A5) (LRR C)		<input type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Red Parent Material (TF2)					
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)		<input type="checkbox"/> Redox Dark Surface (F6)		<input type="checkbox"/> Other (Explain in Remarks)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)		<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> Thick Dark Surface (A12)		<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)		<input type="checkbox"/> Vernal Pools (F9)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)									
Restrictive Layer (if present):					Hydric Soil Present?				
Type: Roadfill rock									
Depth (inches): 0					Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Remarks: Soil pit was not dug, roadfill dense compacted rock									
HYDROLOGY									
Wetland Hydrology Indicators:					Secondary Indicators (2 or more required)				
Primary Indicators (minimum of one required; check all that apply)									
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) (Riverine)					
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) (Riverine)					
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) (Riverine)					
<input type="checkbox"/> Water Marks (B1) (Nonriverine)		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)					
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)					
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)					
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)					
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)					
Field Observations:					Wetland Hydrology Present?				
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____							
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____							
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (includes capillary fringe)		Depth (inches): _____		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
Remarks: Wetland indicators were not observed.									

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Sampling Point: 106-1

Feature ID: W102-1

Project/Site: Zayo Fiberoptic Interconnect Project

City/County: Modoc County

Sampling Date: 8/22/2019

Applicant/Owner: Zayo Group

State: California

Investigator(s): T. Kayatsky, Z. Buecker

Section, Township, Range: 9, T46N, R14E

Local relief (hillside, terrace, etc.): Depression

Local Relief (concave, convex, none): Concave

Slope (%): 2

Subregion (LRR): D Lat: 41.83786

Long: -120.35813

Datum: NAD 83

Soil Map Unit Name: (159) Lorella cobbly clay loam, 30 to 50 percent slopes

NW1 classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? ☐ Are "Normal Circumstances" present? Yes ☒ No ☐Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? ☐ (If needed, explain any answers in Remarks.)**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**Hydrophytic Vegetation Present? Yes ☒ No ☐Hydric Soil Present? Yes ☒ No ☐Wetland Hydrology Present? Yes ☒ No ☐Is the Sampled Area  
within a Wetland?Yes ☒ No ☐**Remarks:** Area was dominated by Juncus effusus (FACW) and Typha latifolia (OBL). All three wetland parameters observed.**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: _____)				
1				
2				
3				
4				
5				
		0	= Total Cover	

Herb Stratum (Plot size: 1 m x 1 m)				
1 Juneff	Juncus effusus	65	YES	FACW
2 Typlat	Typha latifolia	25	YES	OBL
3 MENARV	Mentha arvensis	10	NO	FACW
4				
5				
6				
7				
8				
9				
10				
11				
		100	= Total Cover	

Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

%Bare Ground in Herb

% Cover of Biotic

Stratum: 0

Crust: \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species

That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant

Species Across All Strata: 2 (B)

Percent of Dominant Species

That Are OBL, FACW, or FAC: 100% (A/B)

**Prevalence Index worksheet:**

Total % Cover of: Multiply by:

OBL species 25 x 1 = 25

FACW species 75 x 2 = 150

FAC species 0 x 3 = 0

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 100 (A) 175 (B)

Prevalence Index = B/A = 1.75

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is &gt;50%

Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)5 - Wetland Non-Vascular Plants<sup>1</sup>6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.**Hydrophytic  
Vegetation  
Present?**Yes ☒ No ☐**Remarks:** Area was dominated by hydrophytic vegetation.



SOIL		Sampling Point: 106-1						
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10 yr 2/1	100					Silty clay	Prominent redox concentrations
4-10	10 yr 4/1	30	5 yr 5/8	20	C	M	Silty clay	
	10 yr 3/1	50						
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)								
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)		Indicators for Problematic Hydric Soils <sup>3</sup> :					
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> 1 cm Muck (A9) (LRR C)					
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		<input type="checkbox"/> 2 cm Muck (A10) (LRR B)					
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Reduced Vertic (F18)					
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Red Parent Material (TF2)					
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)		<input type="checkbox"/> Other (Explain in Remarks)					
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
Restrictive Layer (if present):					Hydric Soil Present?			
Type: <input type="text"/> Rock								
Depth (inches): <input type="text"/> 10					Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Remarks: Hydric soil indicators were observed; depleted matrix and depleted below dark surface.								
HYDROLOGY								
Wetland Hydrology Indicators:					Secondary Indicators (2 or more required)			
Primary Indicators (minimum of one required; check all that apply)					<input type="checkbox"/> Water Marks (B1) (Riverine)			
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Sediment Deposits (B2) (Riverine)					
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Drift Deposits (B3) (Riverine)					
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)		<input checked="" type="checkbox"/> Drainage Patterns (B10)					
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input checked="" type="checkbox"/> Dry-Season Water Table (C2)					
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Crayfish Burrows (C8)					
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)					
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Shallow Aquitard (D3)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)					
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)							
Field Observations:					Wetland Hydrology Present?			
Surface Water Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	<input type="text"/> 3 plus				
Water Table Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	<input type="text"/> 0				
Saturation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	<input type="text"/> 0	Yes <input type="checkbox"/> No <input type="checkbox"/>			
(includes capillary fringe)								
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks: Wetland hydrology indicators observed include saturation and high water table with 12 inches of the soil surface, surface water, water stained leaves, drainage patterns, dry season water table and passes FAC neutral test.								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Sampling Point: 107-1

Feature ID: U102-1

Project/Site: Zayo Fiberoptic Interconnect Project

City/County: Modoc County

Sampling Date: 8/22/2019

Applicant/Owner: Zayo Group

State: California

Investigator(s): T. Kayatsky, Z. Buecker

Section, Township, Range: 9, T46N, R14E

Local relief (hillside, terrace, etc.): Road slope

Local Relief (concave, convex, none): Convex

Slope (%): 45

Subregion (LRR): D Lat: 41.83785

Long: -120.35818

Datum: NAD 83

Soil Map Unit Name: (159) Lorella cobbly clay loam, 30 to 50 percent slopes

NW1 classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? ☐ Are "Normal Circumstances" present? Yes ☒ No ☐Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? ☐ (If needed, explain any answers in Remarks.)**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**Hydrophytic Vegetation Present? Yes ☐ No ☒Hydric Soil Present? Yes ☐ No ☒Wetland Hydrology Present? Yes ☐ No ☒Is the Sampled Area  
within a Wetland?Yes ☐ No ☒**Remarks:** Upland pair point to W102-1. All three wetland parameters were not observed.**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: _____)				
1	Erinau			
2				
3				
4				
5				
		0	= Total Cover	

Herb Stratum	(Plot size: 1 m x 1 m )			
1 Lacser	Lactuca serriola	10	NO	FACU
2 Symchi	Symphyotrichum chilense	10	NO	FAC
3 Elytri	Elymus triticoides	3	NO	UPL
4 Poapra	Poa pratensis	15	NO	FAC
5 Rumcri	Rumex crispus	5	NO	FAC
6 Epibra	Epilobium brachycarpum	10	NO	UPL
7 Tradub	Traigopogon dubious	10	NO	UPL
8 Helann	Helianthus annuus	3	NO	FACU
9 Acname	Acmispon americanus	3	NO	UPL
10 Brotec	Bromus tectorum	8	NO	UPL
11 Poabul	Poa bulbosa	3	NO	FACU
		80	= Total Cover	

Woody Vine Stratum	(Plot size: _____)	_____	_____	_____	_____
1	_____	_____	_____	_____	_____
2	_____	_____	_____	_____	_____
		0	= Total Cover		

%Bare Ground in Herb

% Cover of Biotic

Stratum: 20

Crust: \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species

That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant

Species Across All Strata: 0 (B)

Percent of Dominant Species

That Are OBL, FACW, or FAC: #DIV/0! (A/B)

**Prevalence Index worksheet:**

Total % Cover of: Multiply by:

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 30 x 3 = 90

FACU species 16 x 4 = 64

UPL species 34 x 5 = 170

Column Totals: 80 (A) 324 (B)

Prevalence Index = B/A = 4.05

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is &gt;50%

No 3 - Prevalence Index is ≤3.0<sup>1</sup>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)5 - Wetland Non-Vascular Plants<sup>1</sup>6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.**Hydrophytic  
Vegetation  
Present?**Yes ☐ No ☒**Remarks:** Vegetation did not pass the dominance test or prevalence index test. Dominant vegetation upland.

[illegible]

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Sampling Point: 113-1

Feature ID: W103-1

Project/Site: Zayo Fiberoptic Interconnect Project

City/County: Modoc County

Sampling Date: 8/23/2019

Applicant/Owner: Zayo Group

State: California

Investigator(s): T. Kayatsky, Z. Buecker, M. Oats

Section, Township, Range: 4, T46N, R14E

Local relief (hillside, terrace, etc.): Hillside

Local Relief (concave, convex, none): Concave

Slope (%): 5

Subregion (LRR): D

Lat: 41.84956

Long: -120.35804

Datum: NAD83

Soil Map Unit Name: (179) Puls extremely stony clay loam, 0 to 9 percent slopes

NW1 classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? ☐ Are "Normal Circumstances" present? Yes ☒ No ☐Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? ☐ (If needed, explain any answers in Remarks.)**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**Hydrophytic Vegetation Present? Yes ☒ No ☐Hydric Soil Present? Yes ☒ No ☐Wetland Hydrology Present? Yes ☒ No ☐Is the Sampled Area  
within a Wetland?Yes ☒ No ☐**Remarks:** All three wetland parameters were observed, using problematic soils (see soil remarks).**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER**3/3 Abbrev. Species Name Absolute Dominant Indicator  
Tree Stratum (Plot size: 15' radius) % Cover Species? Status

1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)

1				
2				
3				
4				
5				
		0	= Total Cover	

Herb Stratum (Plot size: 5' radius)

1	Allval	Allium validum	20	YES	OBL
2	Epiden	Epilobium densiflorum	10	NO	FACW
3	Carsub2	Carex subfusca	20	YES	FAC
4	Madglo	Madia glomerata	10	NO	FACU
5	Junocc	Juncus occidentalis	20	YES	FACW
6	Epicil	Epilobium ciliatum	2	NO	FACW
7					
8					
9					
10					
11					
		82	= Total Cover		

Woody Vine Stratum (Plot size: )

1				
2				
		0	= Total Cover	

%Bare Ground in Herb

% Cover of Biotic

Stratum: 18

Crust:

**Dominance Test worksheet:**Number of Dominant Species  
That Are OBL, FACW, or FAC: 3 (A)Total Number of Dominant  
Species Across All Strata: 3 (B)Percent of Dominant Species  
That Are OBL, FACW, or FAC: 100% (A/B)**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species	20	x 1 = 20
FACW species	32	x 2 = 64
FAC species	20	x 3 = 60
FACU species	10	x 4 = 40
UPL species	0	x 5 = 0
Column Totals:	82	(A) 184 (B)
Prevalence Index = B/A = 2.2439		

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is &gt;50%

Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>4 - Morphological Adaptations<sup>1</sup> (Provide supporting  
data in Remarks or on a separate sheet)5 - Wetland Non-Vascular Plants<sup>1</sup>6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)<sup>1</sup> Indicators of hydric soil and wetland hydrology must  
be present unless disturbed or problematic.**Hydrophytic  
Vegetation  
Present?**Yes ☒ No ☐**Remarks:** Area was dominated by hydrophytic vegetation.

[illegible]

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Sampling Point: 114-1

Feature ID: U103-1

Project/Site: Zayo Fiberoptic Interconnect Project

City/County: Modoc County

Sampling Date: 8/23/2019

Applicant/Owner: Zayo Group

State: California

Investigator(s): T. Kayatsky, Z. Buecker, M. Oats

Section, Township, Range: 4, T46N, R14E

Local relief (hillside, terrace, etc.): Terrace

Local Relief (concave, convex, none): Convex

Slope (%): 2

Subregion (LRR): D Lat: 41.84958

Long: -120.35813

Datum: NAD83

Soil Map Unit Name: (179) Puls extremely stony clay loam, 0 to 9 percent slopes

NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? ☐ Are "Normal Circumstances" present? Yes ☒ No ☐Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? ☐ (If needed, explain any answers in Remarks.)**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**Hydrophytic Vegetation Present? Yes ☐ No ☒Hydric Soil Present? Yes ☐ No ☒Wetland Hydrology Present? Yes ☐ No ☒Is the Sampled Area  
within a Wetland?Yes ☐ No ☒**Remarks:** Upland pair point to W103-1, was dominated by upland vegetation, and hydric soils and hydrology indicators were not observed.**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: _____)				
1				
2				
3				
4				
5				
		0	= Total Cover	

Herb Stratum (Plot size: 1 m x 1 m)				
1 Epibra	Epilobium brachycarpum	10	NO	UPL
2 Elymed	Elymus medusea	5	NO	UPL
3 Tradub	Traigopogon dubious	10	NO	UPL
4 Lacser	Lactuca serriola	15	YES	FACU
5 Poapra	Poa pratensis	10	NO	FAC
6 Cirarv	Cirsium arvense	5	NO	FACU
7				
8				
9				
10				
11				
		55	= Total Cover	

Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

%Bare Ground in Herb

% Cover of Biotic

Stratum: 45

Crust: \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species

That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant

Species Across All Strata: 1 (B)

Percent of Dominant Species

That Are OBL, FACW, or FAC: 0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of: Multiply by:

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 10 x 3 = 30

FACU species 20 x 4 = 80

UPL species 25 x 5 = 125

Column Totals: 55 (A) 235 (B)

Prevalence Index = B/A = 4.2727

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is &gt;50%

3 - Prevalence Index is ≤3.0<sup>1</sup>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)5 - Wetland Non-Vascular Plants<sup>1</sup>6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.**Hydrophytic  
Vegetation**

Present?

Yes ☐ No ☒**Remarks:** Area dominated by upland herbaceous vegetation.

SOIL							Sampling Point:	
114-1								
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10 YR 2/1	100					Loam	Small gravel throughout
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>					
<input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )					
<input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )					
<input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)					
<input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Depleted Dark Surface (F7)								
<input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Redox Depressions (F8)								
<input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Vernal Pools (F9)								
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b>					<b>Hydric Soil Present?</b>			
Type: Roadfill rock, compacted					Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Depth (inches): 4								
<b>Remarks:</b> Hydric soil indicators were not observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>			
<b>Primary Indicators (minimum of one required; check all that apply)</b>					<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Salt Crust (B11)					<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Biotic Crust (B12)					<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Aquatic Invertebrates (B13)					<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Hydrogen Sulfide Odor (C1)					<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)					<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Presence of Reduced Iron (C4)					<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)					<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7)					<input type="checkbox"/> FAC-Neutral Test (D5)			
<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Other (Explain in Remarks)								
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____					Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____								
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____								
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicators were not observed.								

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 001-3		<b>Feature ID:</b> D001-2		<b>Date:</b> 8/19/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> JA/ZB					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Stream perpendicular to highway (U.S. 395) <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.59381, -120.42273			
<b>Potential anthropogenic influences on the channel system:</b> Highway runoff, power line easement in area.					
<b>Brief site description:</b> Perennial stream crosses under highway perpendicularly, location near a power line easement.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography <b>Dates:</b> ESRI GIS imagery		<input type="checkbox"/> Stream gage data <b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies		Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
Hydrogeomorphic Floodplain Units					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D001-2

Cross section ID:

Date: 8/19/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species                  | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

**Comments:**

Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents a perennial stream.

**Floodplain unit:**    ☒ Low-Flow Channel    ☐ Active Floodplain    ☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Silt/large cobbleTotal veg cover: 2 % Tree: 0 % Shrub: 0 % Herb: 2 %

Community successional stage:

- |   |  |
|---|--|
| <input type="checkbox"/> NA                             | <input checked="" type="checkbox"/> Mid (herbaceous, shrubs, saplings) |
| <input type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)       |

**Indicators:**

- |   |  |
|---|--|
| <input type="checkbox"/> Mudcracks                      | <input type="checkbox"/> Soil development                |
| <input checked="" type="checkbox"/> Ripples             | <input checked="" type="checkbox"/> Surface relief       |
| <input checked="" type="checkbox"/> Drift and/or debris | <input checked="" type="checkbox"/> Other: Grade control |
| <input type="checkbox"/> Presence of bed and bank       | <input type="checkbox"/> Other: _____                    |
| <input type="checkbox"/> Benches                        | <input type="checkbox"/> Other: _____                    |

**Comments:**

Perennial stream

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

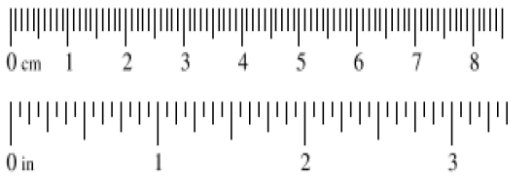
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

Sampling Point <u>010-2</u>		Feature ID: <u>D002a-2</u>		Date: <u>8/19/2019</u>	
Project <u>Zayo Fiberoptic Interconnect Project</u>					
Location <u>Modoc County, California</u>		Photo begin/end file#: <u>See Field Photos</u>			
Investigator(s) <u>JA/ZB</u>					
<input checked="" type="checkbox"/> / <input type="checkbox"/> / <input type="checkbox"/> No normal circumstances exist on the site <input type="checkbox"/> / <input type="checkbox"/> / <input checked="" type="checkbox"/> Is the site significantly disturbed?		Location Details: Stream perpendicular to Projection <u>Lambert</u> Datum <u>NAD83</u> Coordinates <u>41.61365, -120.41687</u>			
<b>Potential anthropogenic influences on the channel system</b> Highway runoff, power line easement in area, stream near cattle pasture.					
<b>Brief site description:</b> Perennial stream crosses under highway perpendicularly, location near a power line easement and near cattle pasture.					
<b>Checklist of resources (if available)</b> <input checked="" type="checkbox"/> Aerial photography <input type="checkbox"/> Stream gage data Dates <u>ESRI GIS imagery</u> Gage number _____ <input checked="" type="checkbox"/> Topographic maps      Period of record: _____ <input type="checkbox"/> Geologic maps <input type="checkbox"/> History of recent effective discharge <input type="checkbox"/> Vegetation maps <input type="checkbox"/> Results of flood frequency analysis <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Rainfall/precipitation map <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year <input type="checkbox"/> Existing delineation(s) for stream events and the most recent event exceeding <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies _____					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>  </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Identify the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section 5. Identify the OHWM and record the indicators. Record the OHWM position via: <input type="checkbox"/> Mapping on aerial photograph <input checked="" type="checkbox"/> GPS <input type="checkbox"/> Digitized on computer <input type="checkbox"/> Other: _____					

Wentworth Size Classes

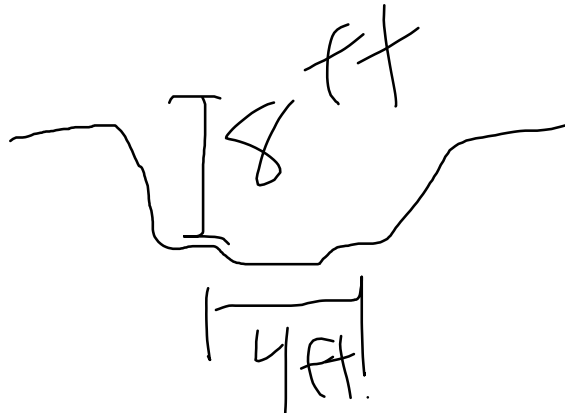
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay



Feature ID:D002-2 Cross section ID

Date: ##### Time:

**cross section drawing**



**OHWL**

GPS point \_\_\_\_\_

**Indicators**

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Change in average sediment te | <input checked="" type="checkbox"/> Break in bank slope |
| <input checked="" type="checkbox"/> Change in vegetation spe      | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation co       | <input type="checkbox"/> Other: _____                   |

**Comments:**

Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slopes, and change in vegetation species and cover. Sampling point documents a perennial stream.

**Floodplain unit** ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point \_\_\_\_\_

**Characteristics of the floodplain**

Average sediment textu Silt/large cobble

Total veg cover 20 % Tree 0 % Shrub 10 % Herb 10 %

Community successional st

- |   |  |
|---|--|
| <input type="checkbox"/> NA                         | <input checked="" type="checkbox"/> Mid (herbaceous, shrubs, sapling |
| <input type="checkbox"/> Early (herbaceous & seedli | <input type="checkbox"/> Late (herbaceous, shrubs, mature tree       |

**Indicator**

- |  |   |
|--|---|
| <input type="checkbox"/> Mudcracks                         | <input checked="" type="checkbox"/> Soil development    |
| <input checked="" type="checkbox"/> Ripple                 | <input checked="" type="checkbox"/> Surface relie       |
| <input checked="" type="checkbox"/> Drift and/or debr      | <input checked="" type="checkbox"/> Other Grade control |
| <input checked="" type="checkbox"/> Presence of bed and ba | <input type="checkbox"/> Other _____                    |
| <input checked="" type="checkbox"/> Benche                 | <input type="checkbox"/> Other _____                    |

**Comments**

Perennial stream

<b>Feature ID:</b>	<b>Cross section ID</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point</b> _____			
<b>Characteristics of the floodplain</b>			
Average sediment textu <u>Sandy loam</u>			
Total veg cover ____ % Tree ____ % Shrub ____ % Herb ____ %			
Community successional st			
<input type="checkbox"/> NA		<input type="checkbox"/> Mid (herbaceous, shrubs, sapling	
<input type="checkbox"/> Early (herbaceous & seedli		<input type="checkbox"/> Late (herbaceous, shrubs, mature tree	
<b>Indicator</b>			
<input type="checkbox"/> Mudcracks		<input type="checkbox"/> Soil development	
<input type="checkbox"/> Ripple		<input type="checkbox"/> Surface relie	
<input type="checkbox"/> Drift and/or debr		<input type="checkbox"/> Other _____	
<input type="checkbox"/> Presence of bed and ba		<input type="checkbox"/> Other _____	
<input type="checkbox"/> Benche		<input type="checkbox"/> Other _____	
<b>Comments</b>			

<b>Floodplain unit</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point</b> _____			
<b>Characteristics of the floodplain</b>			
Average sediment textu _____			
Total veg cover ____ % Tree ____ % Shrub ____ % Herb ____ %			
Community successional st			
<input type="checkbox"/> NA		<input type="checkbox"/> Mid (herbaceous, shrubs, sapling	
<input type="checkbox"/> Early (herbaceous & seedli		<input type="checkbox"/> Late (herbaceous, shrubs, mature tree	
<b>Indicator</b>			
<input type="checkbox"/> Mudcracks		<input type="checkbox"/> Soil development	
<input type="checkbox"/> Ripple		<input type="checkbox"/> Surface relie	
<input type="checkbox"/> Drift and/or debr		<input type="checkbox"/> Other _____	
<input type="checkbox"/> Presence of bed and ba		<input type="checkbox"/> Other _____	
<input type="checkbox"/> Benche		<input type="checkbox"/> Other _____	
<b>Comments</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 112-2		<b>Feature ID:</b> D003-2		<b>Date:</b> 8/20/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> ZB & KT					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 south of Davis Creek		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.62669, -120.40795		
<b>Potential anthropogenic influences on the channel system:</b> Runoff from surrounding agriculture fields upstream of drainage.					
<b>Brief site description:</b> High flow running east/west to culvert under highway (U.S. 395). Surrounding agriculture fields upstream of feature are irrigated.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			



### Wentworth Size Classes

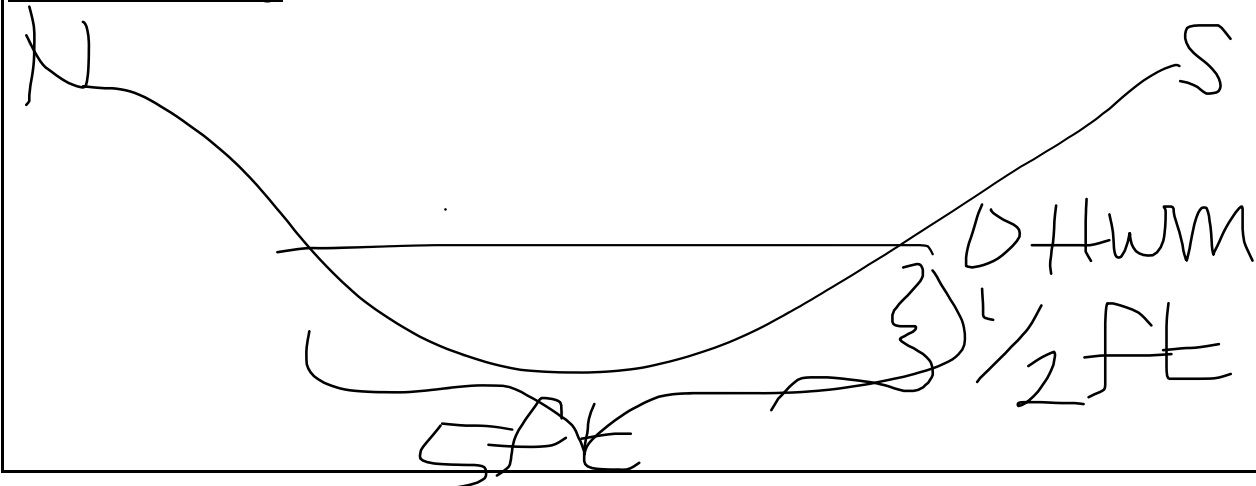
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D003-2

Cross section ID:

Date: 8/20/2019 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☒ Change in vegetation species☒ Change in vegetation cover☐ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, vegetation species and vegetation cover. Sampling point documents a perennial stream.

**Floodplain unit:**☐ Low-Flow Channel☒ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: 95 % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: 95 %

Community successional stage:

☐ NA☒ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

High water table/ surface water at time of survey, see NW001-2.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

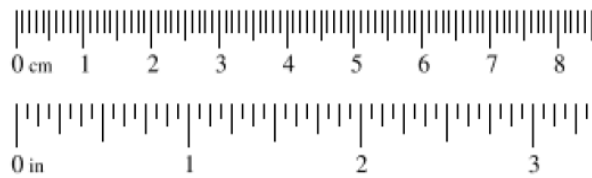
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# **Arid West Ephemeral and Intermittent Streams OHW M Datasheet**

<b>Sampling Point:</b> <u>113-2</u>		<b>Feature ID:</b> <u>D004-2</u>		<b>Date:</b> <u>8/20/2019</u>	
<b>Project:</b> <u>Zayo Fiberoptic Interconnect Project</u>					
<b>Location:</b> <u>Modoc County, California</u>			<b>Photo begin/end file#:</b> <u>See Field Photos</u>		
<b>Investigator(s):</b> <u>TK, ZB</u>					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> <u>Adjacent to U.S. 395 south of Davis Creek</u>		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> <u>Lambert</u> <b>Datum:</b> <u>NAD83</u>		
			<b>Coordinates:</b> <u>41.63695, -120.40265</u>		
<b>Potential anthropogenic influences on the channel system:</b> <u>Fencing, highway (U.S. 395).</u>					
<b>Brief site description:</b> <u>Drainage runs east/west through C009-2 under U.S. 395. Large cobbles and boulders lining streambed. No flow at time of survey.</u>					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> <u>ESRI GIS imagery</u>		<b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input checked="" type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p align="center"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW and record the indicators. Record the OHW position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

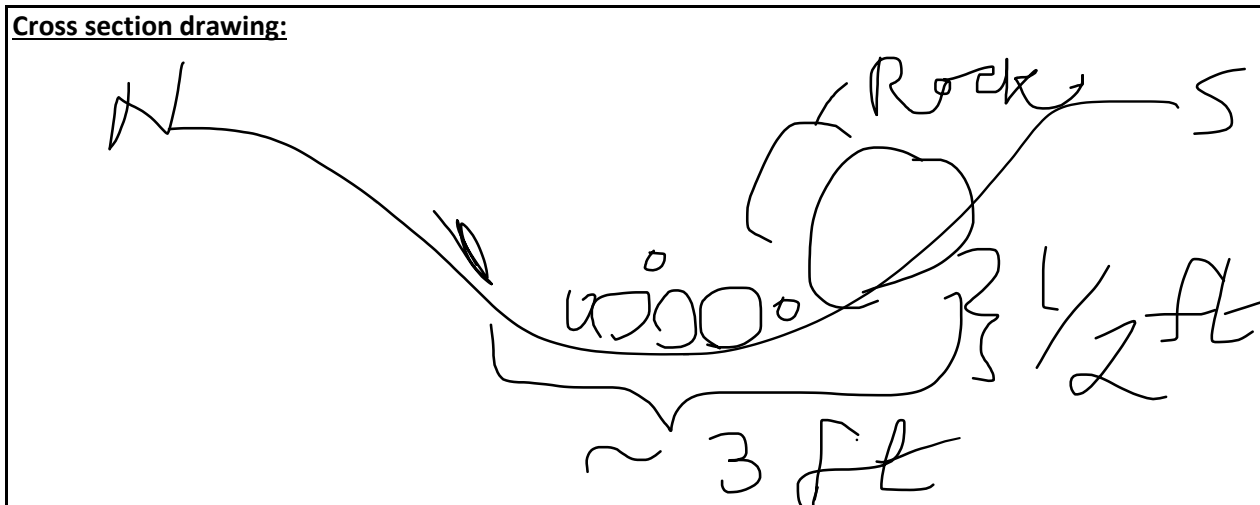
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D004-2

Cross section ID:

Date: 8/20/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☒ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☒ Other: Drift deposits☒ Other: Sediment deposits/sorting**Comments:**

Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, change in vegetation species and cover, drift and sediment deposits. Root exposure as well. Sampling point documents an ephemeral stream.

**Floodplain unit:**☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

### Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 019-2		<b>Feature ID:</b> D005-3		<b>Date:</b> 8/21/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc Co, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> ZB & TK					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 south of Davis Creek		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.65066, -120.39580		
<b>Potential anthropogenic influences on the channel system:</b> Fencing and Highway (U.S. 395).					
<b>Brief site description:</b> Linear ditch out of culvert, banks lined with Phalaris. Associated with W015-2.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p>Hydrogeomorphic Floodplain Units</p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D005-2

Cross section ID:

Date: 8/21/2019 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☒ Other: Drift deposits☒ Other: Algal matting.**Comments:**

Constructed bed and bank feature. OHWM evidenced by change in sediment texture, break in bank slope, drift deposits, and change in vegetation cover. Algal matting also present. Sampling point documents an irrigation canal.

**Floodplain unit:**☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

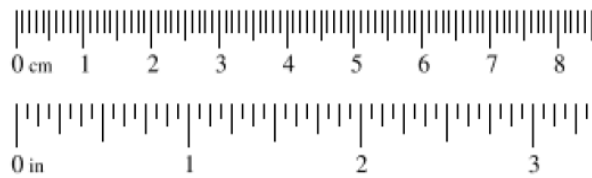
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 052-2		<b>Feature ID:</b> D50-2		<b>Date:</b> 8/20/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO/JA					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Stream adjacent to U.S. 395 and cattle pasture		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.66542, -120.38762		
<b>Potential anthropogenic influences on the channel system:</b> Cattle pasture, highway (U.S. 395) adjacent to stream.					
<b>Brief site description:</b> Perennial stream that runs under highway. Stream used for irrigation and adjacent to cattle pasture and in powerline easement. Wetland adjacent to stream.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW and record the indicators. Record the OHW position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

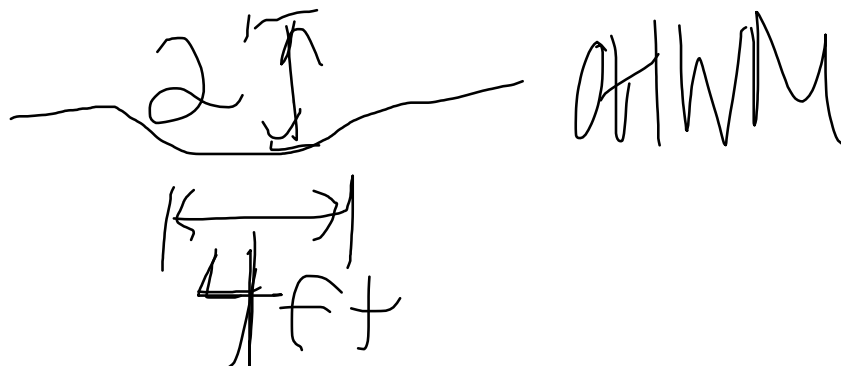
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D50-2

Cross section ID:

Date: 8/20/2019 Time:

**Cross section drawing:****OHWM**

GPS point: Yes

**Indicators:**☐

Change in average sediment texture

☒

Break in bank slope

☒

Change in vegetation species

☐

Other: \_\_\_\_\_

☐

Change in vegetation cover

☐

Other: \_\_\_\_\_

**Comments:**

Constructed bed and bank feature. OHWM evidenced by break in bank slope and change in vegetation species. Sampling point documents an irrigation canal.

**Floodplain unit:**☒

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: 5 % Tree: 0 % Shrub: 1 % Herb: 4 %

Community successional stage:

☐

NA

☐

Mid (herbaceous, shrubs, saplings)

☒

Early (herbaceous &amp; seedlings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**☐

Mudcracks

☒

Soil development

☒

Ripples

☒

Surface relief

☐

Drift and/or debris

☒

Other: Strong baseflow

☒

Presence of bed and bank

☐

Other: \_\_\_\_\_

☐

Benches

☐

Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 054-2		<b>Feature ID:</b> D51-2		<b>Date:</b> 8/20/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc Co, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO/JA					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 and cattle farm		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.67137, -20.38450		
<b>Potential anthropogenic influences on the channel system:</b> Highway and cattle pasture.					
<b>Brief site description:</b> Perennial stream that runs under highway. Stream is an irrigation stream associated with adjacent cattle pasture.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			



### Wentworth Size Classes

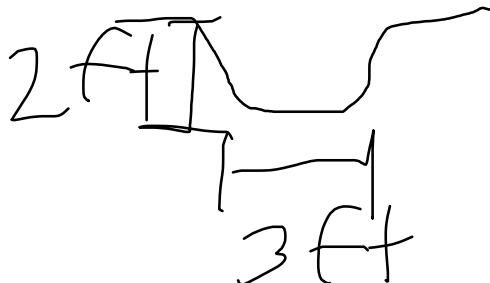
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D51-2

Cross section ID:

Date: 8/20/2019 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**☐

Change in average sediment texture

☒

Break in bank slope

☒

Change in vegetation species

☐

Other: \_\_\_\_\_

☐

Change in vegetation cover

☐

Other: \_\_\_\_\_

**Comments:**

Constructed bed and bank feature. OHWM evidenced by break in bank slope and change in vegetation species. Sampling point documents an irrigation canal.

**Floodplain unit:**☒

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: 5 % Tree: 0 % Shrub: 0 % Herb: 5 %

Community successional stage:

☐

NA

☐

Mid (herbaceous, shrubs, saplings)

☒

Early (herbaceous &amp; seedlings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**☐

Mudcracks

☐

Soil development

☐

Ripples

☒

Surface relief

☐

Drift and/or debris

☐

Other: \_\_\_\_\_

☒

Presence of bed and bank

☐

Other: \_\_\_\_\_

☐

Benches

☐

Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

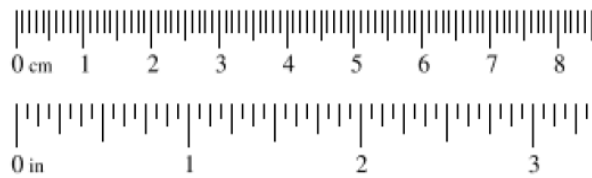
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 055-2		<b>Feature ID:</b> D052-2		<b>Date:</b> 8/20/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc Co, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO/JA					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 and cattle ranch		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.67523, -120.38241		
<b>Potential anthropogenic influences on the channel system:</b> Highway (U.S. 395) and cattle pasture.					
<b>Brief site description:</b> Stream is an ephemeral channel associated with adjacent cattle pasture. The channel is currently dry.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

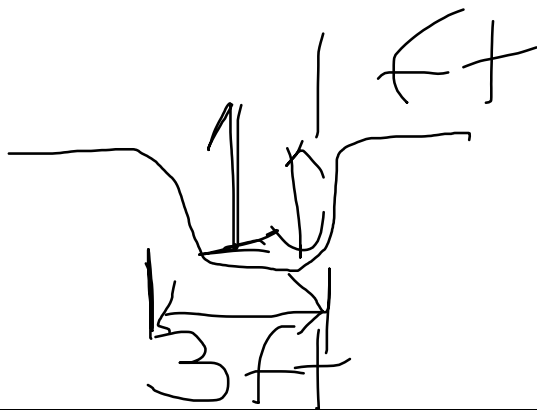
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D52-2

Cross section ID:

Date: 8/20/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**
☐  
☐  
☐

Change in average sediment texture

Change in vegetation species

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

Bed and bank feature. OHWM evidenced by break in bank slope. Sampling point documents an ephemeral stream.

**Floodplain unit:**☒

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: 1 % Tree: 0 % Shrub: 0 % Herb: 1 %

Community successional stage:

☐

NA

☒

Early (herbaceous &amp; seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☒

Presence of bed and bank

☐

Benches

☐

Soil development

☒

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

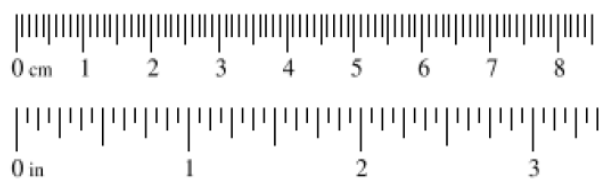
### Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 056-2		<b>Feature ID:</b> D053-2		<b>Date:</b> 8/20/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc Co, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO/JA					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to U.S. 395 and cattle ranch <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.68116, -120.37927			
<b>Potential anthropogenic influences on the channel system:</b> Highway (U.S. 395) and cattle pasture.					
<b>Brief site description:</b> Perennial stream that runs under highway. Stream is associated with adjacent cattle pasture.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography <b>Dates:</b> ESRI GIS imagery		<input type="checkbox"/> Stream gage data <b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies		Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<b>Hydrogeomorphic Floodplain Units</b>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other: _____			



### Wentworth Size Classes

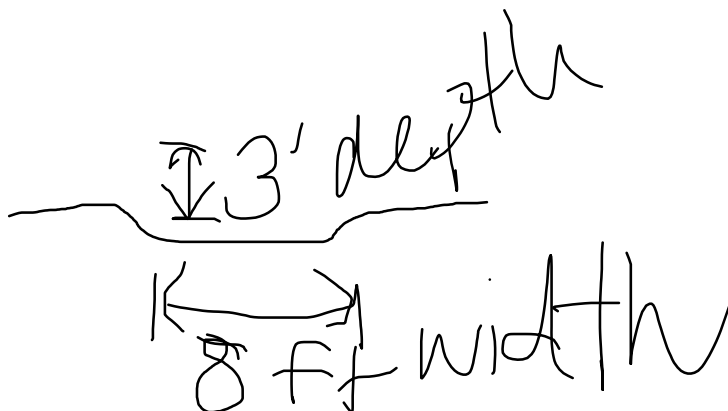
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D53-2

Cross section ID:

Date: 8/20/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☐

Change in average sediment texture

☒

Break in bank slope

☒

Change in vegetation species

☐

Other: \_\_\_\_\_

☐

Change in vegetation cover

☐

Other: \_\_\_\_\_

**Comments:**

Bed and bank feature. OHWM evidenced by change in vegetation species and break in bank slope. Sampling point documents a perennial stream.

**Floodplain unit:**☒

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: 1 % Tree: 0 % Shrub: 0 % Herb: 1 %

Community successional stage:

☐

NA

☐

Mid (herbaceous, shrubs, saplings)

☒

Early (herbaceous &amp; seedlings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**☐

Mudcracks

☐

Soil development

☒

Ripples

☒

Surface relief

☐

Drift and/or debris

☐

Other: \_\_\_\_\_

☒

Presence of bed and bank

☐

Other: \_\_\_\_\_

☐

Benches

☐

Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 63-2		<b>Feature ID:</b> D54-2		<b>Date:</b> 8/21/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO/JA					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to highway (U.S. 395) and cattle		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.75724, -120.37526		
<b>Potential anthropogenic influences on the channel system:</b> Cattle ranch and highway adjacent to feature.					
<b>Brief site description:</b> Ephemeral channel that runs under U.S. 395 and traverses to cattle ranch. Feature located in powerline easement.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

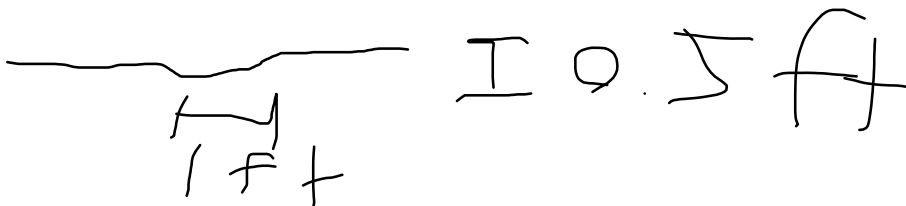
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D54-2

Cross section ID:

Date: 8/21/2019 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

**Comments:**

Bed and bank feature. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: 1 % Tree: 0 % Shrub: 0 % Herb: 1 %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

**Comments:**

Dry ephemeral channel

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# **Arid West Ephemeral and Intermittent Streams OHW M Datasheet**

<b>Sampling Point:</b> <u>108-2</u>		<b>Feature ID:</b> <u>D100-2</u>		<b>Date:</b> <u>8/20/2019</u>	
<b>Project:</b> <u>Zayo Fiberoptic Interconnect Project</u>					
<b>Location:</b> <u>Modoc County, California</u>			<b>Photo begin/end file#:</b> <u>See Field Photos</u>		
<b>Investigator(s):</b> <u>PF, MW</u>					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> <u>Adjacent to U.S. 395 just south of Davis Creek</u> <b>Projection:</b> <u>Lambert</u> <b>Datum:</b> <u>NAD83</u> <b>Coordinates:</b> <u>41.70917, -120.37509</u>			
<b>Potential anthropogenic influences on the channel system:</b> <u>Agriculture and roadway adjacent, within roadway ROW.</u>					
<b>Brief site description:</b> <u>Maintained roadway ROW with ephemeral channel draining to W106. Drainage emerges from wetland as D101-2 and drains to C109-2. Top of bank and OHW M are the same. No</u>					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> <u>ESRI GIS imagery</u>  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<p align="center"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHW M and record the indicators. Record the OHW M position via: <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer         </div> <div style="text-align: center;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other: _____         </div> </div>					



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D100-2

Cross section ID:

Date: 8/20/2019 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

**Comments:**

Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

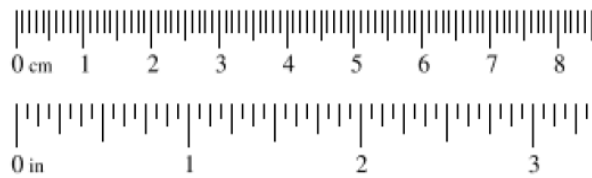
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# **Arid West Ephemeral and Intermittent Streams OHW M Datasheet**

<b>Sampling Point:</b> <u>109-2</u>		<b>Feature ID:</b> <u>D101-2</u>		<b>Date:</b> <u>8/20/2019</u>	
<b>Project:</b> <u>Zayo Fiberoptic Interconnect Project</u>					
<b>Location:</b> <u>Modoc County, California</u>			<b>Photo begin/end file#:</b> <u>See Field Photos</u>		
<b>Investigator(s):</b> <u>PF, MW</u>					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> <u>Adjacent to U.S. 395 south of Davis Creek</u> <b>Projection:</b> <u>Lambert</u> <b>Datum:</b> <u>NAD83</u> <b>Coordinates:</b> <u>41.71015, -120.37505</u>			
<b>Potential anthropogenic influences on the channel system:</b> <u>Agriculture and roadway adjacent, within roadway ROW.</u>					
<b>Brief site description:</b> <u>Maintained roadway ROW with ephemeral channel draining from W106. Drains to C109-2. Top of bank and OHW M points are the same. No floodplain associated with the drainage</u>					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> <u>ESRI GIS imagery</u>  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<p align="center"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other: _____             </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D101-2

Cross section ID:

Date: 8/20/2019 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

**Comments:**

Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# **Arid West Ephemeral and Intermittent Streams OHW M Datasheet**

<b>Sampling Point:</b> <u>110-2</u>		<b>Feature ID:</b> <u>D102-2</u>		<b>Date:</b> <u>8/20/2019</u>	
<b>Project:</b> <u>Zayo Fiberoptic Interconnect Project</u>					
<b>Location:</b> <u>Modoc County, California</u>			<b>Photo begin/end file#:</b> <u>See Field Photos</u>		
<b>Investigator(s):</b> <u>PF, MW</u>					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> <u>Adjacent to U.S. 395 just south of Davis Creek</u>		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> <u>Lambert</u> <b>Datum:</b> <u>NAD83</u>		
			<b>Coordinates:</b> <u>41.71431, -120.37503</u>		
<b>Potential anthropogenic influences on the channel system:</b> <u>Agriculture and roadway adjacent, within roadway ROW.</u>					
<b>Brief site description:</b> <u>Maintained roadway ROW with intermittent channel. Drains to C110-2. No floodplain associated with the drainage feature.</u>					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> <u>ESRI GIS imagery</u>		<b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p align="center"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW and record the indicators. Record the OHW position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			



### Wentworth Size Classes

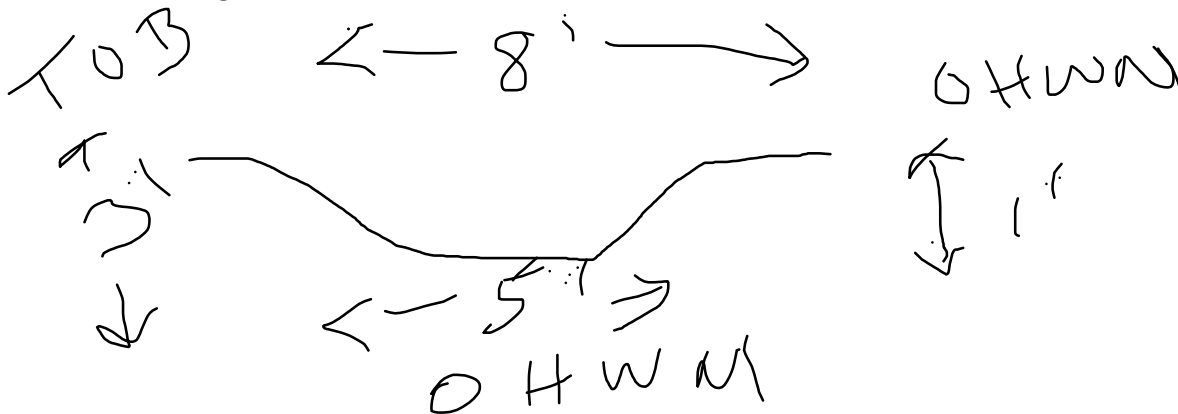
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D102-2

Cross section ID:

Date: 8/20/2019 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species                  | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

**Comments:**

Defined bed and bank feature. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an intermittent stream.

**Floodplain unit:**☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

- |   |  |
|---|--|
| <input type="checkbox"/> NA                             | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

**Indicators:**

- |   |   |
|---|---|
| <input type="checkbox"/> Mudcracks                | <input type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples                  | <input type="checkbox"/> Surface relief   |
| <input type="checkbox"/> Drift and/or debris      | <input type="checkbox"/> Other: _____     |
| <input type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____     |
| <input type="checkbox"/> Benches                  | <input type="checkbox"/> Other: _____     |

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# **Arid West Ephemeral and Intermittent Streams OHW M Datasheet**

<b>Sampling Point:</b> <u>111-2</u>		<b>Feature ID:</b> <u>D103-2</u>		<b>Date:</b> <u>8/20/2019</u>	
<b>Project:</b> <u>Zayo Fiberoptic Interconnect Project</u>					
<b>Location:</b> <u>Modoc County, California</u>			<b>Photo begin/end file#:</b> <u>See Field Photos</u>		
<b>Investigator(s):</b> <u>PF, MW</u>					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> <u>Adjacent to U.S. 395 just south of Davis Creek</u>		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> <u>Lambert</u> <b>Datum:</b> <u>NAD83</u>		
			<b>Coordinates:</b> <u>41.70267, -120.37544</u>		
<b>Potential anthropogenic influences on the channel system:</b> <u>Agriculture and roadway adjacent, within roadway ROW.</u>					
<b>Brief site description:</b> <u>Maintained roadway ROW with ephemeral channel. Hydrologically connected to W104-2 via C106-2 and C105-2, and W103-2 via C104-2. Top of bank and OHW M are the same. No</u>					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> <u>ESRI GIS imagery</u>		<b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and			
<input type="checkbox"/> Existing delineation(s) for site		the most recent event exceeding a 5-year event			
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p align="center"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D103-2

Cross section ID:

Date: 8/20/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☒ Change in vegetation species☐ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation species. Sasampling point documents an ephemeral stream.

**Floodplain unit:**☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

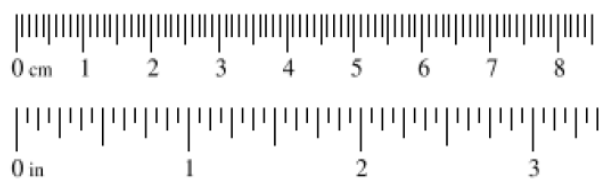
# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 116-2		<b>Feature ID:</b> D104-2		<b>Date:</b> 8/21/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> PF, MW					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 near Davis Creek		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.73361, -120.37513		
<b>Potential anthropogenic influences on the channel system:</b> Maintained roadway ROW and agricultural adjacent.					
<b>Brief site description:</b> Roadside, channelized stream connected to W110-2 via C117-2.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			



### Wentworth Size Classes

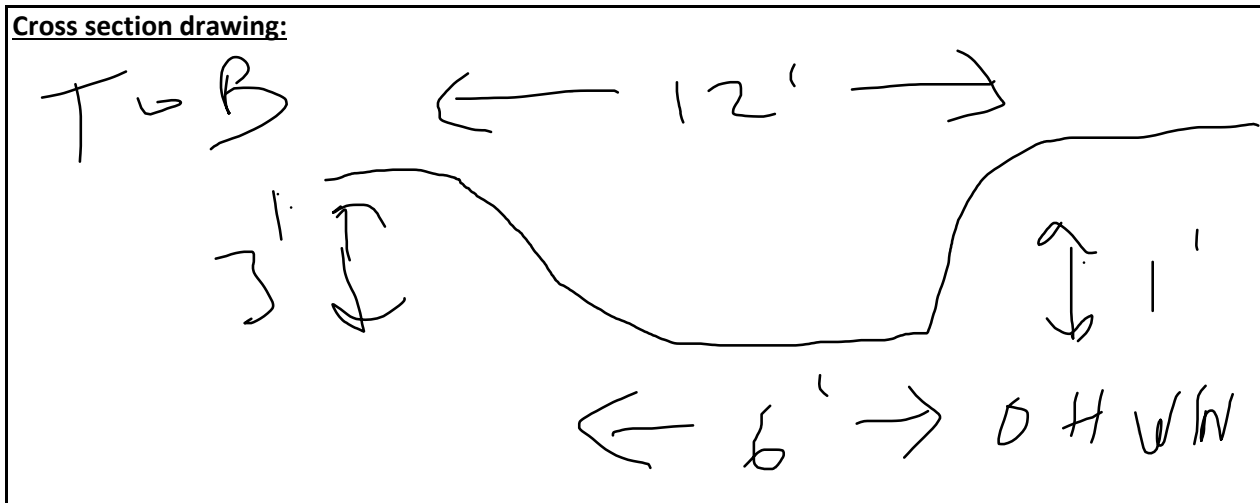
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D104-2

Cross section ID:

Date: 8/21/2019 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**☐

Change in average sediment texture

☐

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

Defined bed and bank feature. OHWM evidenced by break in bank slope and change in vegetation cover. Sampling point documents a perennial stream.

**Floodplain unit:**☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Early (herbaceous &amp; seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☐

Presence of bed and bank

☐

Benches

☐

Soil development

☐

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

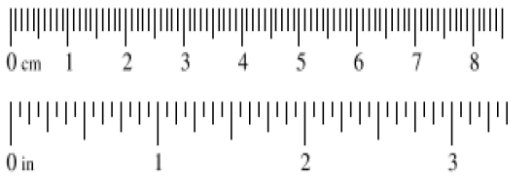
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# **Arid West Ephemeral and Intermittent Streams OHWM Datasheet**

<b>Sampling Point</b> <u>117-2</u>		<b>Feature ID:</b> <u>D105-2</u>	<b>Date:</b> <u>8/21/2019</u>
<b>Project</b> <u>Zayo Fiberoptic Interconnect Project</u>			
<b>Location</b> <u>Modoc County, California</u>		<b>Photo begin/end file#:</b> <u>See Field Photos</u>	
<b>Investigator(s)</b> <u>PF, MW</u>			
<input checked="" type="checkbox"/> / <input type="checkbox"/> <b>No</b> normal circumstances exist on the site <input type="checkbox"/> / <input checked="" type="checkbox"/> <b>Is the site significantly disturbed?</b>		<b>Location Details:</b> <u>Adjacent to U.S. 395 near Davis Creek</u>	
		<b>Projection</b> <u>Lambert</u> <b>Datum</b> <u>NAD83</u>	
		<b>Coordinates</b> <u>41.73645, -120.37535</u>	
<b>Potential anthropogenic influences on the channel system</b> <u>Maintained roadway ROW and agricultural adjacent.</u>			
<b>Brief site description:</b> <u>Natural stream channel flowing under roadway via C119-2.</u>			
<b>Checklist of resources (if available)</b>			
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data	
<b>Dates</b> <u>ESRI GIS imagery</u>		<b>Gage number</b> _____	
<input checked="" type="checkbox"/> Topographic maps		Period of record: _____	
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharge	
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis	
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating	
<input type="checkbox"/> Rainfall/precipitation map		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year	
<input type="checkbox"/> Existing delineation(s) for stream events and the most recent event exceeding			
<input checked="" type="checkbox"/> Global positioning system (GPS)			
<input type="checkbox"/> Other studies			
<b>Hydrogeomorphic Floodplain Units</b>			
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the</b>			
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.			
2. Identify the floodplain units.			
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.			
a) Record the floodplain unit and GPS position			
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.			
c) Identify any indicators present at the location			
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section			
5. Identify the OHWM and record the indicators. Record the OHWM position via:			
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS	
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other: _____	

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay
		Mud



Feature ID:D105-2 Cross section ID

Date: ##### Time:

**Cross section drawing**



**OHWM**

GPS point \_\_\_\_\_

**Indicators**

- |   |   |
|---|---|
| <input type="checkbox"/> Change in average sediment te      | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation spe           | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation co | <input type="checkbox"/> Other: _____                   |

**Comments:**

Defined bed and bank feature. OHWM evidenced by break in bank slope and change in vegetation cover. Sampling point documents a perennial stream.

**Floodplain unit**

☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point \_\_\_\_\_

**Characteristics of the floodplain**

Average sediment textu \_\_\_\_\_

Total veg cover \_\_\_\_ % Tree \_\_\_\_ % Shrub \_\_\_\_ % Herb \_\_\_\_ %

Community successional st

- |   |  |
|---|--|
| <input type="checkbox"/> NA                         | <input type="checkbox"/> Mid (herbaceous, shrubs, sapling      |
| <input type="checkbox"/> Early (herbaceous & seedli | <input type="checkbox"/> Late (herbaceous, shrubs, mature tree |

**Indicator**

- |   |   |
|---|---|
| <input type="checkbox"/> Mudcracks              | <input type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripple                 | <input type="checkbox"/> Surface relie    |
| <input type="checkbox"/> Drift and/or debr      | <input type="checkbox"/> Other _____      |
| <input type="checkbox"/> Presence of bed and ba | <input type="checkbox"/> Other _____      |
| <input type="checkbox"/> Benche                 | <input type="checkbox"/> Other _____      |

**Comments**

<b>Feature ID:</b>	<b>Cross section ID</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point</b> _____			
<b>Characteristics of the floodplain</b>			
Average sediment textu _____			
Total veg cover ____ % Tree ____ % Shrub ____ % Herb ____ %			
Community successional st			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, sapling		
<input type="checkbox"/> Early (herbaceous & seedli	<input type="checkbox"/> Late (herbaceous, shrubs, mature tree		
<b>Indicator</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripple	<input type="checkbox"/> Surface relie		
<input type="checkbox"/> Drift and/or debr	<input type="checkbox"/> Other _____		
<input type="checkbox"/> Presence of bed and ba	<input type="checkbox"/> Other _____		
<input type="checkbox"/> Benche	<input type="checkbox"/> Other _____		
<b>Comments</b>			

<b>Floodplain unit</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point</b> _____			
<b>Characteristics of the floodplain</b>			
Average sediment textu _____			
Total veg cover ____ % Tree ____ % Shrub ____ % Herb ____ %			
Community successional st			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, sapling		
<input type="checkbox"/> Early (herbaceous & seedli	<input type="checkbox"/> Late (herbaceous, shrubs, mature tree		
<b>Indicator</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripple	<input type="checkbox"/> Surface relie		
<input type="checkbox"/> Drift and/or debr	<input type="checkbox"/> Other _____		
<input type="checkbox"/> Presence of bed and ba	<input type="checkbox"/> Other _____		
<input type="checkbox"/> Benche	<input type="checkbox"/> Other _____		
<b>Comments</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 118-2		<b>Feature ID:</b> D106-2		<b>Date:</b> 8/21/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> PF, MW					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to U.S. 395 near Davis Creek <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.73704, -120.37541			
<b>Potential anthropogenic influences on the channel system:</b> Maintained roadway ROW and agricultural adjacent.					
<b>Brief site description:</b> Natural stream channel flowing under roadway via C120-2, top of bank and OHW M are the same.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography <b>Dates:</b> ESRI GIS imagery		<input type="checkbox"/> Stream gage data <b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies		Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
Hydrogeomorphic Floodplain Units					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			



### Wentworth Size Classes

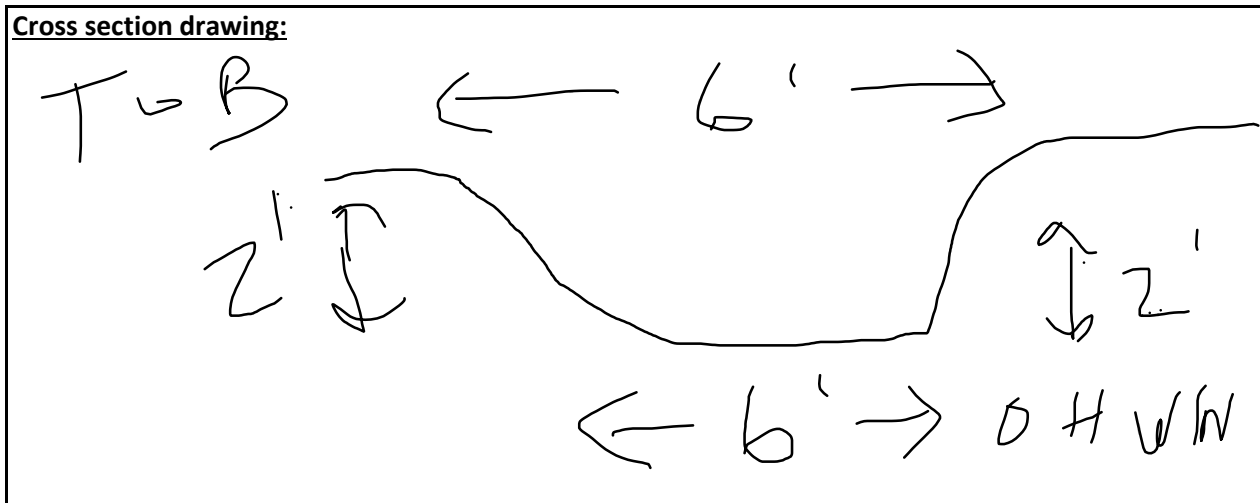
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D106-2

Cross section ID:

Date: 8/21/2019 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**☐

Change in average sediment texture

☐

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

Defined bed and bank feature. OHWM evidenced by break in bank slope and change in vegetation cover. Sampling point documents a perennial stream.

**Floodplain unit:**☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Early (herbaceous &amp; seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☐

Presence of bed and bank

☐

Benches

☐

Soil development

☐

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

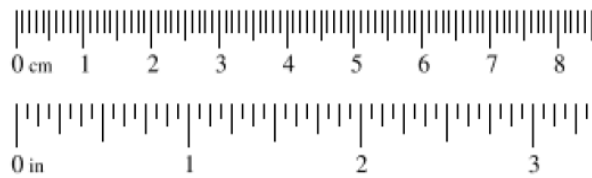
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 121-2		<b>Feature ID:</b> D107-2		<b>Date:</b> 8/21/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> PF, MW					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 near Davis Creek		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.738391, -120.37552		
<b>Potential anthropogenic influences on the channel system:</b> Maintained roadway ROW and agricultural adjacent.					
<b>Brief site description:</b> Roadside channelized stream at C121. Top of bank and OHW M are the same.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

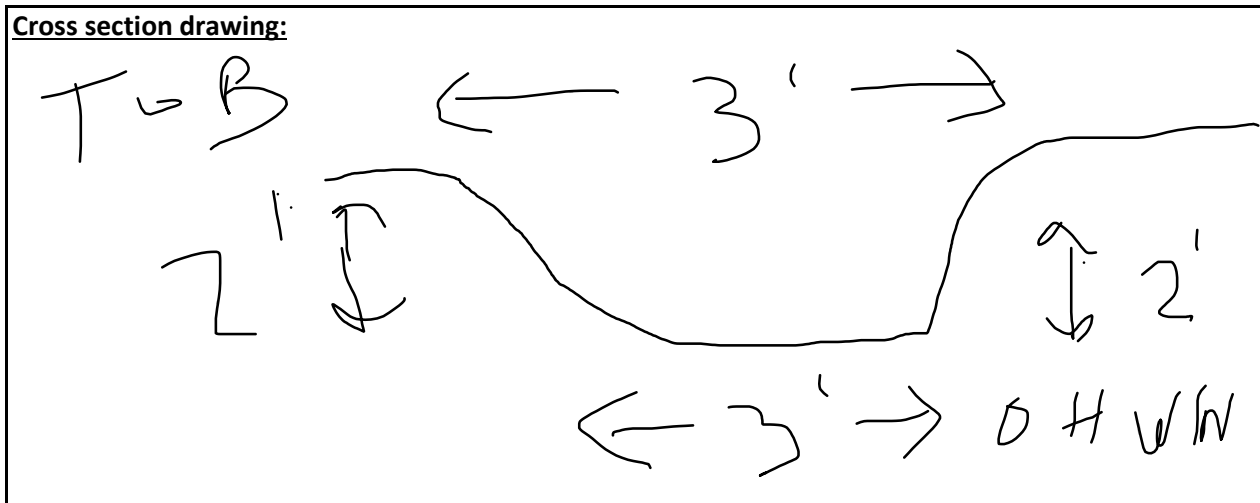
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D107-2

Cross section ID:

Date: 8/21/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☐

Change in average sediment texture

☒

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

Bed and bank feature. OHWM evidenced by break in bank slope, change in vegetation species and cover. Sampling point documents an ephemeral stream.

**Floodplain unit:**☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Early (herbaceous &amp; seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☐

Presence of bed and bank

☐

Benches

☐

Soil development

☐

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

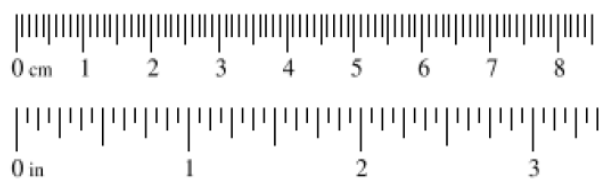
# **Arid West Ephemeral and Intermittent Streams OHW M Datasheet**

<b>Sampling Point:</b> <u>122-2</u>		<b>Feature ID:</b> <u>D108-2</u>		<b>Date:</b> <u>8/21/2019</u>	
<b>Project:</b> <u>Zayo Fiberoptic Interconnect Project</u>					
<b>Location:</b> <u>Modoc County, California</u>			<b>Photo begin/end file#:</b> <u>See Field Photos</u>		
<b>Investigator(s):</b> <u>PF, MW</u>					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> <u>Adjacent to U.S. 395 near Davis Creek</u>		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> <u>Lambert</u> <b>Datum:</b> <u>NAD83</u>		
			<b>Coordinates:</b> <u>41.73914, -120.37562</u>		
<b>Potential anthropogenic influences on the channel system:</b> <u>Maintained roadway ROW and agricultural adjacent.</u>					
<b>Brief site description:</b> <u>Roadside channelized stream at C122-2. Top of bank and OHW M are the same.</u>					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> <u>ESRI GIS imagery</u>		<b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and			
<input type="checkbox"/> Existing delineation(s) for site		the most recent event exceeding a 5-year event			
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p align="center"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			



### Wentworth Size Classes

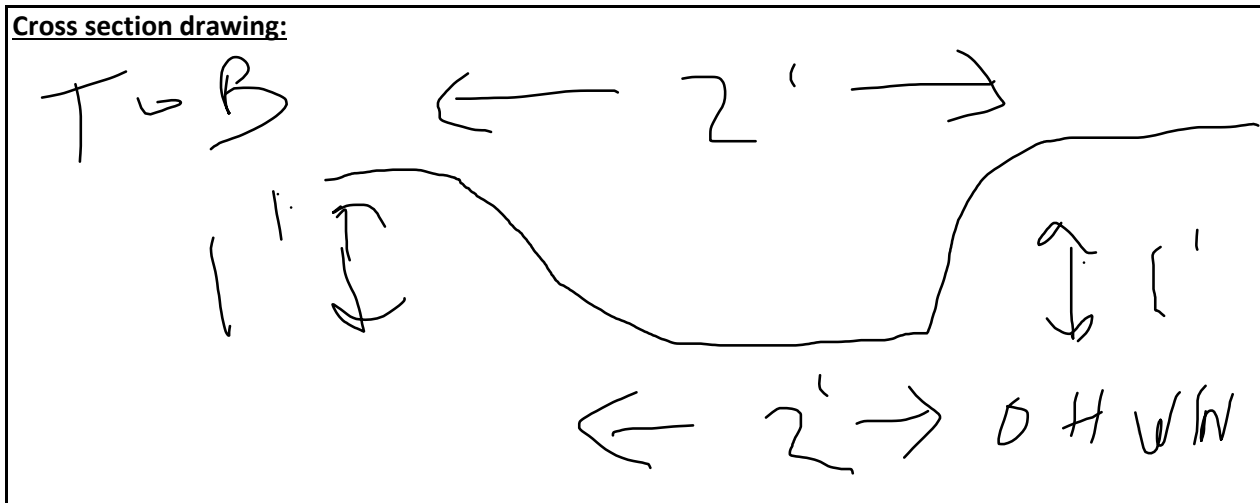
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D108-2

Cross section ID:

Date: 8/21/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

**Comments:**

Defined bed and bank feature. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents a perennial stream.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

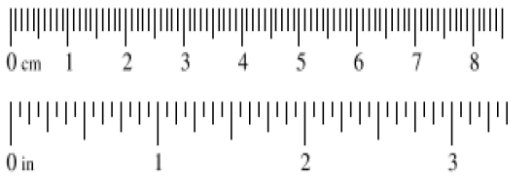
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

Sampling Point <u>123-2</u>		Feature ID: <u>D109-2</u>		Date: <u>8/22/2019</u>																					
Project <u>Zayo Fiberoptic Interconnect Project</u>																									
Location <u>Modoc County, California</u>		Photo begin/end file#: <u>See Field Photos</u>																							
Investigator(s) <u>PF, MW</u>																									
<input checked="" type="checkbox"/> / <input type="checkbox"/> No normal circumstances exist on the site <input type="checkbox"/> / <input checked="" type="checkbox"/> Is the site significantly disturbed?		Location Details: <u>Adjacent to U.S. 395 near Davis Creek.</u> Projection <u>Lambert</u> Datum <u>NAD83</u> Coordinates <u>41.74058, -120.37570</u>																							
Potential anthropogenic influences on the channel system <u>Maintained roadway ROW and agricultural adjacent.</u>																									
Brief site description: <u>Roadside channelized stream at C123-2.</u>																									
Checklist of resources (if available) <table border="0"> <tr> <td><input checked="" type="checkbox"/> Aerial photography</td> <td><input type="checkbox"/> Stream gage data</td> </tr> <tr> <td>Dates <u>ESRI GIS imagery</u></td> <td>Gage number _____</td> </tr> <tr> <td><input checked="" type="checkbox"/> Topographic maps</td> <td>Period of record: _____</td> </tr> <tr> <td><input type="checkbox"/> Geologic maps</td> <td><input type="checkbox"/> History of recent effective discharge</td> </tr> <tr> <td><input type="checkbox"/> Vegetation maps</td> <td><input type="checkbox"/> Results of flood frequency analysis</td> </tr> <tr> <td><input checked="" type="checkbox"/> Soils maps</td> <td><input type="checkbox"/> Most recent shift-adjusted rating</td> </tr> <tr> <td><input type="checkbox"/> Rainfall/precipitation map</td> <td><input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year</td> </tr> <tr> <td><input type="checkbox"/> Existing delineation(s) for events and the most recent event exceeding</td> <td></td> </tr> <tr> <td><input checked="" type="checkbox"/> Global positioning system (GPS)</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Other studies</td> <td></td> </tr> </table>						<input checked="" type="checkbox"/> Aerial photography	<input type="checkbox"/> Stream gage data	Dates <u>ESRI GIS imagery</u>	Gage number _____	<input checked="" type="checkbox"/> Topographic maps	Period of record: _____	<input type="checkbox"/> Geologic maps	<input type="checkbox"/> History of recent effective discharge	<input type="checkbox"/> Vegetation maps	<input type="checkbox"/> Results of flood frequency analysis	<input checked="" type="checkbox"/> Soils maps	<input type="checkbox"/> Most recent shift-adjusted rating	<input type="checkbox"/> Rainfall/precipitation map	<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year	<input type="checkbox"/> Existing delineation(s) for events and the most recent event exceeding		<input checked="" type="checkbox"/> Global positioning system (GPS)		<input type="checkbox"/> Other studies	
<input checked="" type="checkbox"/> Aerial photography	<input type="checkbox"/> Stream gage data																								
Dates <u>ESRI GIS imagery</u>	Gage number _____																								
<input checked="" type="checkbox"/> Topographic maps	Period of record: _____																								
<input type="checkbox"/> Geologic maps	<input type="checkbox"/> History of recent effective discharge																								
<input type="checkbox"/> Vegetation maps	<input type="checkbox"/> Results of flood frequency analysis																								
<input checked="" type="checkbox"/> Soils maps	<input type="checkbox"/> Most recent shift-adjusted rating																								
<input type="checkbox"/> Rainfall/precipitation map	<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year																								
<input type="checkbox"/> Existing delineation(s) for events and the most recent event exceeding																									
<input checked="" type="checkbox"/> Global positioning system (GPS)																									
<input type="checkbox"/> Other studies																									
<div style="text-align: center;"> <p>Hydrogeomorphic Floodplain Units</p> </div>																									
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the</b>																									
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.																									
2. Identify the floodplain units.																									
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.																									
a) Record the floodplain unit and GPS position																									
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.																									
c) Identify any indicators present at the location																									
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section																									
5. Identify the OHWM and record the indicators. Record the OHWM position via:																									
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS																							
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other: _____																							

Wentworth Size Classes

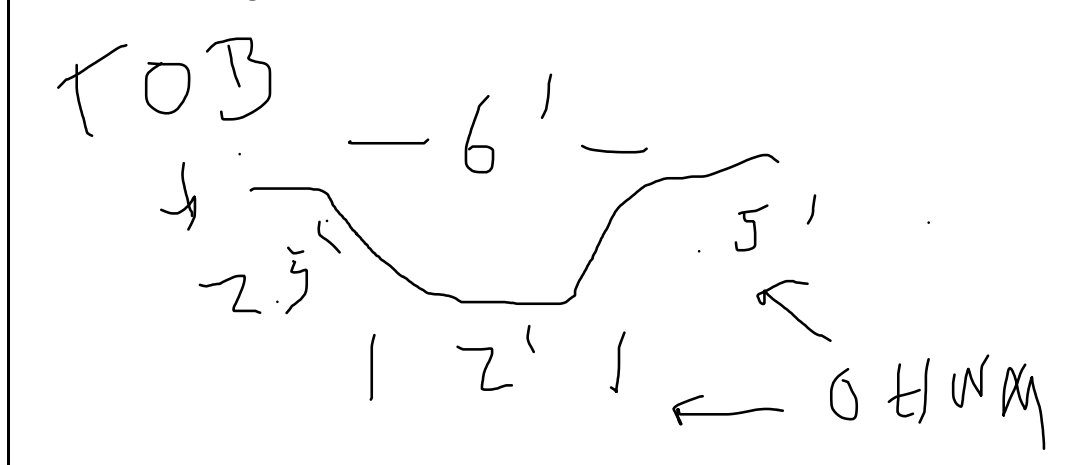
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay



Feature ID:D-109-2 Cross section ID

Date: ##### Time:

**cross section drawing**



**OHWM**

GPS point \_\_\_\_\_

**Indicators**

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Change in average sediment te | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation spe                 | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation co       | <input type="checkbox"/> Other: _____                   |

**Comments:**

Bed and bank feature. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

**Floodplain unit**

☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point \_\_\_\_\_

**Characteristics of the floodplain**

Average sediment textu \_\_\_\_\_

Total veg cover \_\_\_\_ % Tree \_\_\_\_ % Shrub \_\_\_\_ % Herb \_\_\_\_ %

Community successional st

- |   |  |
|---|--|
| <input type="checkbox"/> NA                         | <input type="checkbox"/> Mid (herbaceous, shrubs, sapling      |
| <input type="checkbox"/> Early (herbaceous & seedli | <input type="checkbox"/> Late (herbaceous, shrubs, mature tree |

**Indicator**

- |   |   |
|---|---|
| <input type="checkbox"/> Mudcracks              | <input type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripple                 | <input type="checkbox"/> Surface relie    |
| <input type="checkbox"/> Drift and/or debr      | <input type="checkbox"/> Other _____      |
| <input type="checkbox"/> Presence of bed and ba | <input type="checkbox"/> Other _____      |
| <input type="checkbox"/> Benche                 | <input type="checkbox"/> Other _____      |

**Comments**

<b>Feature ID:</b>	<b>Cross section ID</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point</b> _____			
<b>Characteristics of the floodplain</b>			
Average sediment textu _____			
Total veg cover ____ % Tree ____ % Shrub ____ % Herb ____ %			
Community successional st			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, sapling		
<input type="checkbox"/> Early (herbaceous & seedli	<input type="checkbox"/> Late (herbaceous, shrubs, mature tree		
<b>Indicator</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripple	<input type="checkbox"/> Surface relie		
<input type="checkbox"/> Drift and/or debr	<input type="checkbox"/> Other _____		
<input type="checkbox"/> Presence of bed and ba	<input type="checkbox"/> Other _____		
<input type="checkbox"/> Benche	<input type="checkbox"/> Other _____		
<b>Comments</b>			

<b>Floodplain unit</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point</b> _____			
<b>Characteristics of the floodplain</b>			
Average sediment textu _____			
Total veg cover ____ % Tree ____ % Shrub ____ % Herb ____ %			
Community successional st			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, sapling		
<input type="checkbox"/> Early (herbaceous & seedli	<input type="checkbox"/> Late (herbaceous, shrubs, mature tree		
<b>Indicator</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripple	<input type="checkbox"/> Surface relie		
<input type="checkbox"/> Drift and/or debr	<input type="checkbox"/> Other _____		
<input type="checkbox"/> Presence of bed and ba	<input type="checkbox"/> Other _____		
<input type="checkbox"/> Benche	<input type="checkbox"/> Other _____		
<b>Comments</b>			

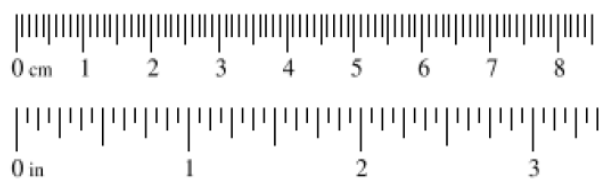
# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 126-2		<b>Feature ID:</b> D110-2		<b>Date:</b> 8/22/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> PF, MW					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 near Davis Creek		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.74464, -120.375531		
<b>Potential anthropogenic influences on the channel system:</b> Maintained roadway ROW and agricultural adjacent.					
<b>Brief site description:</b> Roadside channelized stream at C124-2, armored bank.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			



### Wentworth Size Classes

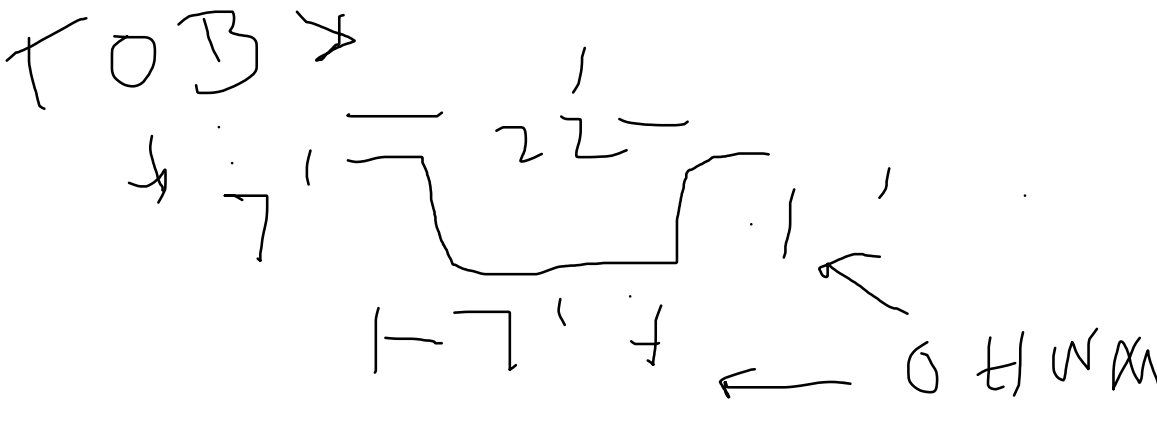
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D-110-2

Cross section ID:

Date: 8/22/2019 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species                  | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

**Comments:**

Defined bed and bank feature. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents a perennial stream.

**Floodplain unit:**☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

- |   |  |
|---|--|
| <input type="checkbox"/> NA                             | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

**Indicators:**

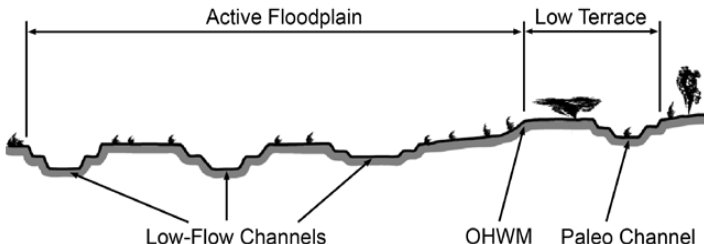
- |   |   |
|---|---|
| <input type="checkbox"/> Mudcracks                | <input type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples                  | <input type="checkbox"/> Surface relief   |
| <input type="checkbox"/> Drift and/or debris      | <input type="checkbox"/> Other: _____     |
| <input type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____     |
| <input type="checkbox"/> Benches                  | <input type="checkbox"/> Other: _____     |

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> <u>127-2</u>		<b>Feature ID:</b> <u>D111-2</u>		<b>Date:</b> <u>8/22/2019</u>	
<b>Project:</b> <u>Zayo Fiberoptic Interconnect Project</u>					
<b>Location:</b> <u>Modoc County, California</u>			<b>Photo begin/end file#:</b> <u>See Field Photos</u>		
<b>Investigator(s):</b> <u>PF, MW</u>					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to U.S. 395 <b>Projection:</b> <u>Lambert</u> <b>Datum:</b> <u>NAD83</u> <b>Coordinates:</b> <u>41.74509, -120.37557</u>			
<b>Potential anthropogenic influences on the channel system:</b> Maintained roadway ROW and agricultural adjacent.					
<b>Brief site description:</b> Roadside channelized stream at C125-2.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> <u>ESRI GIS imagery</u>  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHW M and record the indicators. Record the OHW M position via: <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input type="checkbox"/> Mapping on aerial photograph    <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Digitized on computer        <input type="checkbox"/> Other:         </div>					

### Wentworth Size Classes

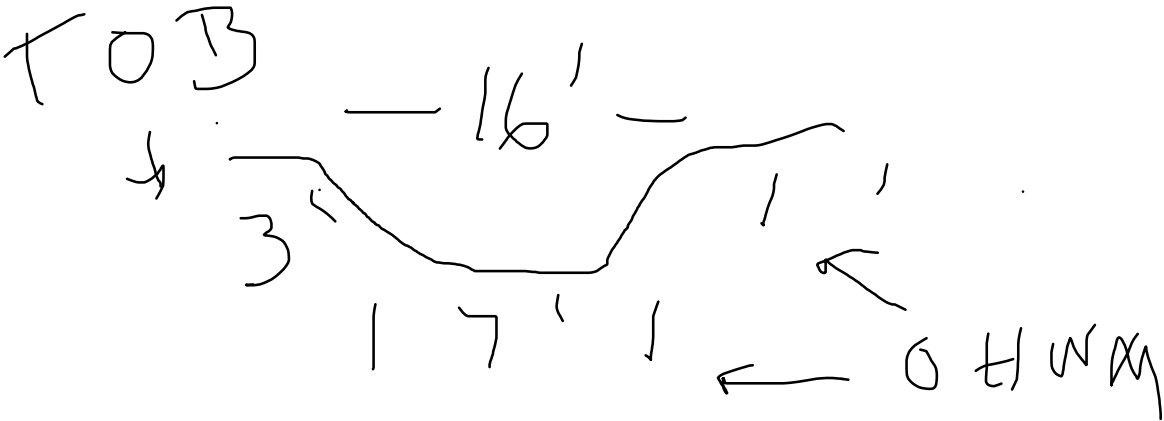
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D-111-2

Cross section ID:

Date: 8/22/2019 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Bed and bank feature. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents a perennial stream.

**Floodplain unit:**☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

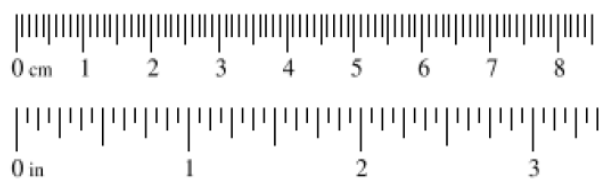
# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 130-2		<b>Feature ID:</b> D112-2		<b>Date:</b> 8/23/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc Co, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> PF/MW/JA					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 north of Alturas		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.56513, -120.43935		
<b>Potential anthropogenic influences on the channel system:</b> Highway (U.S. 395) adjacent to feature.					
<b>Brief site description:</b> Dry ephemeral stream located adjacent to U.S. 395. Stream originates from highway shoulder and was dry during the field delineation.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW and record the indicators. Record the OHW position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			



### Wentworth Size Classes

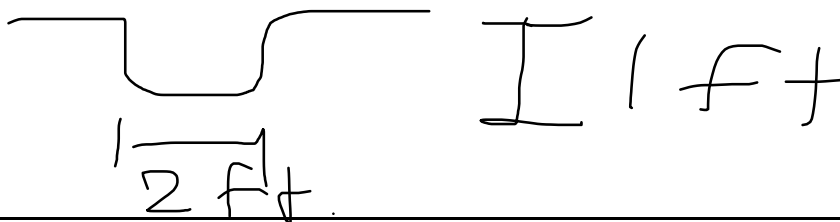
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D112-2

Cross section ID:

Date: 8/23/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

**Comments:**

Bed and bank feature that exhibits scour. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Sandy loamTotal veg cover: 1 % Tree: 0 % Shrub: 0 % Herb: 1 %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# **Arid West Ephemeral and Intermittent Streams OHWM Datasheet**

<b>Sampling Point:</b> 131-2	<b>Feature ID:</b> D113-2	<b>Date:</b> 8/23/2019
<b>Project:</b> Zayo Fiberoptic Interconnect Project		
<b>Location:</b> Modoc Co, California	<b>Photo begin/end file#:</b> See Field Photos	
<b>Investigator(s):</b> PF/MW/JA		
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site?	<b>Location Details:</b> Adjacent to U.S. 395 north of Alturas	
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		
<b>Projection:</b> Lambert		<b>Datum:</b> NAD83
<b>Coordinates:</b> 41.56774, -120.43748		

## **Potential anthropogenic influences on the channel system:**

Highway (U.S. 395) adjacent to feature.

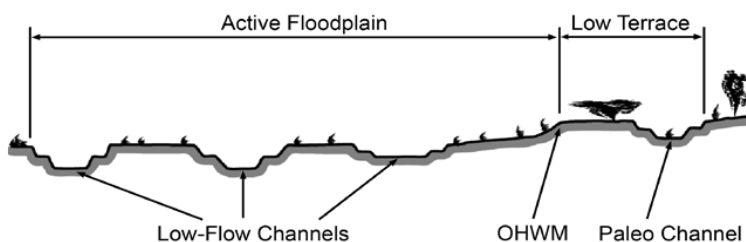
## **Brief site description:**

Dry ephemeral stream located adjacent to U.S. 395. Stream originates from highway shoulder and was dry during the field delineation.

## **Checklist of resources (if available):**

<input checked="" type="checkbox"/> Aerial photography <b>Dates:</b> ESRI GIS imagery	<input type="checkbox"/> Stream gage data <b>Gage number:</b> _____
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies:	Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

## **Hydrogeomorphic Floodplain Units**



## **Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:**

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
  - a) Record the floodplain unit and GPS position.
  - b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
  - c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:

<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS
<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:

### Wentworth Size Classes

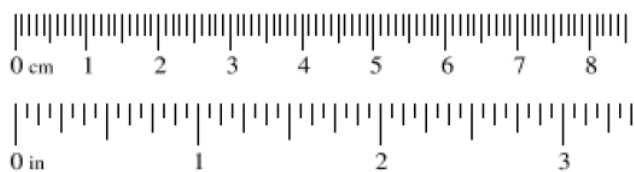
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud

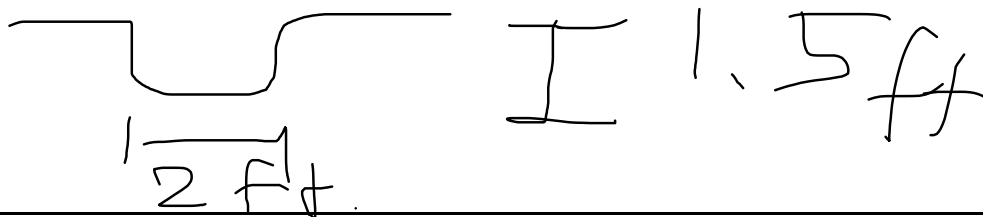


Feature ID: D113-2

Cross section ID:

Date: 8/23/2019

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

## Indicators:

☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_

## Comments:

Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

## Characteristics of the floodplain unit:

Average sediment texture: Sandy loamTotal veg cover: 1 % Tree: 0 % Shrub: 0 % Herb: 1 %

Community successional stage:

☐ NA☒ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)

## Indicators:

☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☐ Soil development☒ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_

## Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

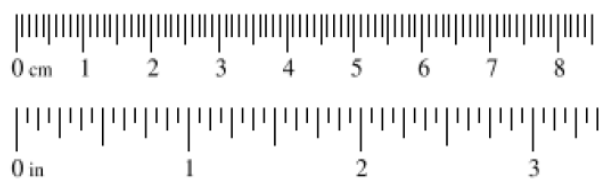
# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 132-2		<b>Feature ID:</b> D114-2		<b>Date:</b> 8/23/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc Co, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> PF/MW/JA					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 north of Alturas		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.57064, -120.43595		
<b>Potential anthropogenic influences on the channel system:</b> Highway (U.S. 395) and residence adjacent to feature.					
<b>Brief site description:</b> Dry ephemeral stream located adjacent to U.S. 395. Stream originates from culvert and was observed dry during field delineation.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			



### Wentworth Size Classes

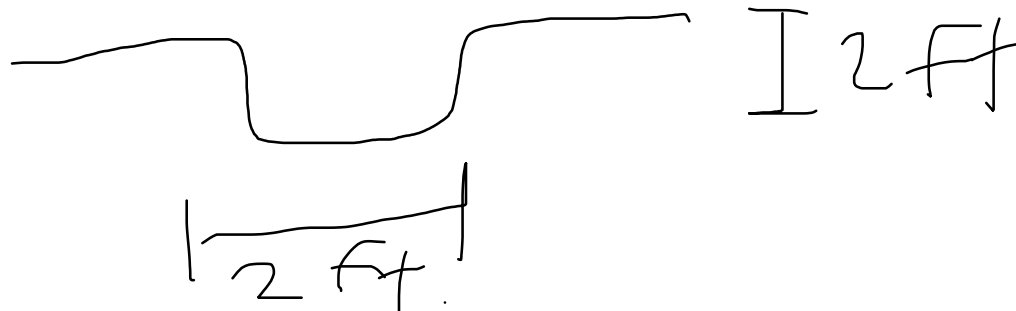
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D114-2

Cross section ID:

Date: 8/23/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

**Comments:**

Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Sandy loamTotal veg cover: 1 % Tree: 0 % Shrub: 0 % Herb: 1 %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> <u>135-2</u>		<b>Feature ID:</b> <u>D115-2</u>		<b>Date:</b> <u>8/26/2019</u>	
<b>Project:</b> <u>Zayo Fiberoptic Interconnect Project</u>					
<b>Location:</b> <u>Modoc Co, California</u>			<b>Photo begin/end file#:</b> <u>See Field Photos</u>		
<b>Investigator(s):</b> <u>Mike Williams/Justin Ahn</u>					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> <u>Adjacent to U.S. 395 north of Alturas</u> <b>Projection:</b> <u>Lambert</u> <b>Datum:</b> <u>NAD83</u> <b>Coordinates:</b> <u>41.57472, -120.43554</u>			
<b>Potential anthropogenic influences on the channel system:</b> Cattle pasture and highway (U.S. 395) adjacent to feature.					
<b>Brief site description:</b> Dry intermittent channel located in wetland feature adjacent to U.S. 395 and cattle pasture.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography <b>Dates:</b> <u>ESRI GIS imagery</u>		<input type="checkbox"/> Stream gage data <b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies		Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<b>Hydrogeomorphic Floodplain Units</b>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other: _____			

### Wentworth Size Classes

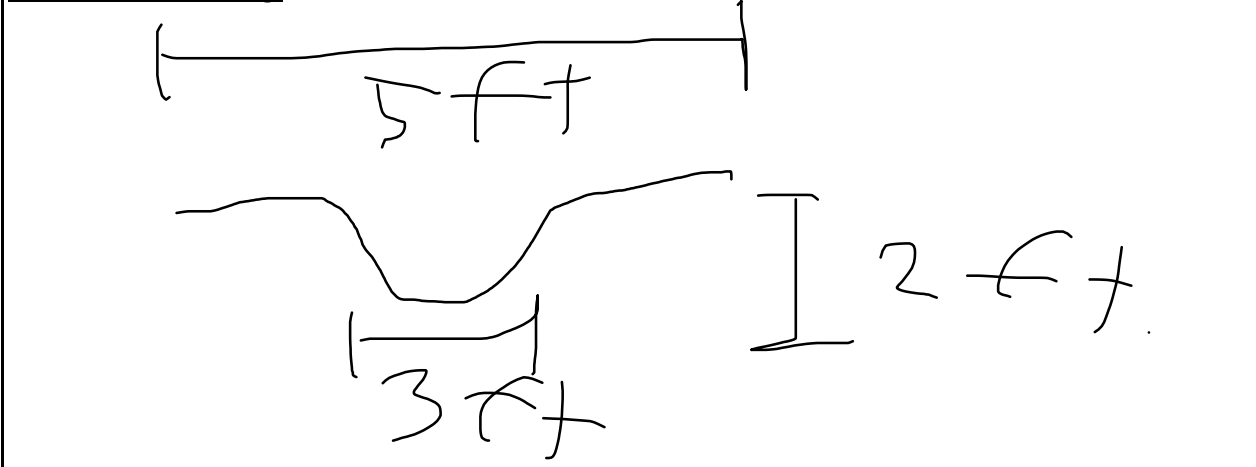
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D115-2

Cross section ID:

Date: 8/26/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☐

Change in average sediment texture

☐

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

Defined bed and bank feature with scoured channel. OHWM evidenced by break in bank slope and change in vegetation cover. Sampling point documents an ephemeral stream.

**Floodplain unit:**☒

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Silty loamTotal veg cover: 2 % Tree: 0 % Shrub: 0 % Herb: 2 %

Community successional stage:

☐

NA

☒

Early (herbaceous &amp; seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☒

Presence of bed and bank

☐

Benches

☐

Soil development

☐

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

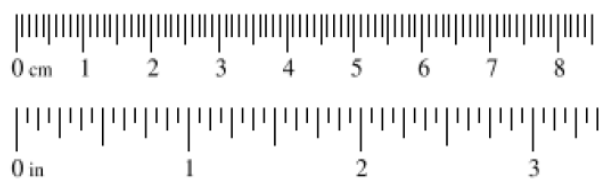
# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 136-2		<b>Feature ID:</b> D116-2		<b>Date:</b> 8/26/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc Co, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> Mike Williams/Justin Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 north of Alturas		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.57519, -120.43556		
<b>Potential anthropogenic influences on the channel system:</b> Cattle pasture and highway (U.S. 395) adjacent to feature.					
<b>Brief site description:</b> Dry intermittent channel located in wetland feature adjacent to U.S. 395 and cattle pasture.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			



### Wentworth Size Classes

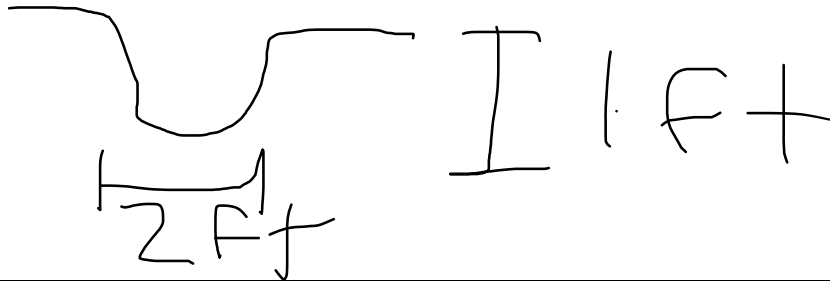
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D116-2

Cross section ID:

Date: 8/26/2019 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**

- |  |   |
|--|---|
| <input type="checkbox"/> Change in average sediment texture    | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species          | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover | <input type="checkbox"/> Other: _____                   |

**Comments:**

Defined bed and bank feature with scoured channel. OHWM indicated by break in bank slope and change in vegetation cover. Sampling point documents an ephemeral stream.

**Floodplain unit:**☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Silty loamTotal veg cover: 2 % Tree: 0 % Shrub: 0 % Herb: 2 %

Community successional stage:

- |  |  |
|--|--|
| <input type="checkbox"/> NA  | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input checked="" type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

**Indicators:**

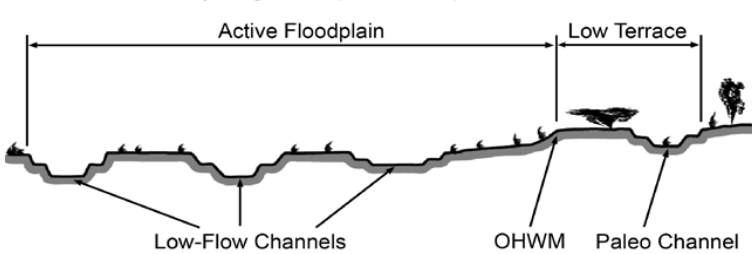
- |  |   |
|--|---|
| <input type="checkbox"/> Mudcracks                           | <input type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples                             | <input type="checkbox"/> Surface relief   |
| <input type="checkbox"/> Drift and/or debris                 | <input type="checkbox"/> Other: _____     |
| <input checked="" type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____     |
| <input type="checkbox"/> Benches                             | <input type="checkbox"/> Other: _____     |

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 137-2		<b>Feature ID:</b> D117-2		<b>Date:</b> 8/26/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc Co, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> Mike Williams/Justin Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 north of Alturas <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.57794, -120.43538		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
<b>Potential anthropogenic influences on the channel system:</b> Cattle pasture and highway adjacent to feature.					
<b>Brief site description:</b> Dry intermittent channel located in wetland feature adjacent to U.S. 395 and cattle pasture.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.           <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:           <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer           </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:           </div> </div> </li> </ol>					

### Wentworth Size Classes

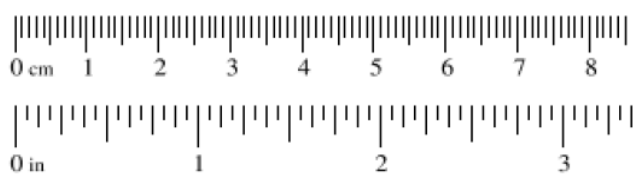
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud

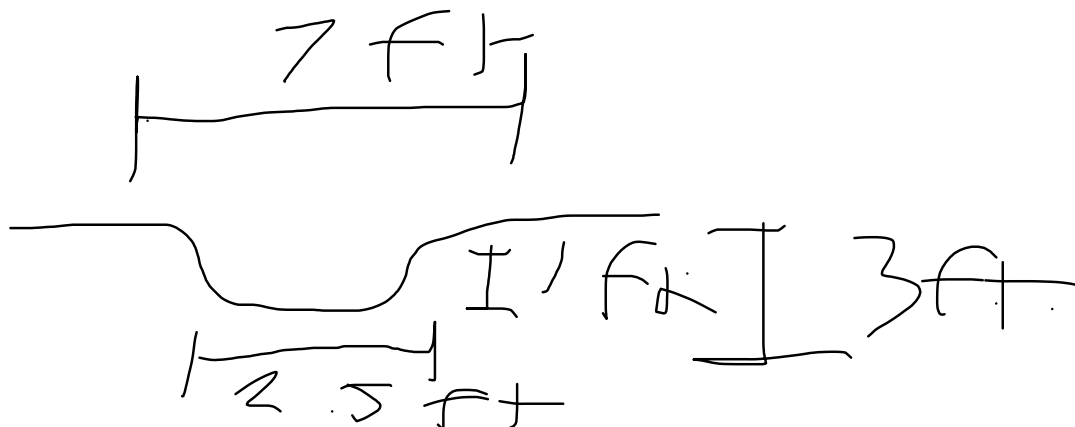


Feature ID: D117-2

Cross section ID:

Date: 8/26/2019

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☐ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Bed and bank feature with scoured channel. OHWM evidenced by break in bank slope and change in vegetation cover. Sampling point documents an ephemeral stream.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: Silty loamTotal veg cover: 4 % Tree: 0 % Shrub: 0 % Herb: 4 %

Community successional stage:

☐ NA☒ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☒ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Point: 001-2 Feature ID: W001a-2  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/19/2019  
 Investigator(s): JA/ZB Section, Township, Range: 1, T43N, R13E  
 Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): D Lat: 41.58992 Long: -120.42756 Datum: NAD 83  
 Soil Map Unit Name: (121) Daphnedale stony loam, 30 to 50 percent slopes NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: All three indicators met, area is a wetland. Data part of segments A and B.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: 15x15ft)			
1 Sallas	Salix lasiandra	80	YES	FACW
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
5 _____	_____	_____	_____	_____
		80	= Total Cover	
Herb Stratum	(Plot size: 5x5ft)			
1 Agrgig	Agrostis gigantea	30	YES	FACW
2 Carshe	Carex sheldonii	70	YES	OBL
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
5 _____	_____	_____	_____	_____
6 _____	_____	_____	_____	_____
7 _____	_____	_____	_____	_____
8 _____	_____	_____	_____	_____
9 _____	_____	_____	_____	_____
10 _____	_____	_____	_____	_____
11 _____	_____	_____	_____	_____
		100	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum:      % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>70</u>	x 1 = <u>70</u>
FACW species <u>110</u>	x 2 = <u>220</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>180</u> (A)	<u>290</u> (B)
Prevalence Index = B/A = <u>1.6111</u>	

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Hydrophytic vegetation (OBL & FACW) dominant.



SOIL		Sampling Point: 001-2					
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>							
Depth (inches)	Matrix		Redox Features		Texture	Remarks	
	Color (moist)	%	Color (moist)	%			
0-8	10YR 3/2	100			Sandy loam		
8-18	10YR 4/1	60	10YR 3/3	35	C	M	Sandy loam
			7.5YR 5/6	5	C	PL	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.					<sup>4</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>							
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>				
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )				
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )				
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Reduced Vertic (F18)				
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )	<input checked="" type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Red Parent Material (TF2)				
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )	<input type="checkbox"/> Redox Dark Surface (F6)		<input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)						
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)						
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)							
<b>Restrictive Layer (if present):</b>			<b>Hydric Soil Present?</b>				
Type: _____			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Depth (inches): _____							
<b>Remarks:</b> Hydric soil indicator Depleted Matrix observed.							
<b>HYDROLOGY</b>							
<b>Wetland Hydrology Indicators:</b>			<b>Secondary Indicators (2 or more required)</b>				
Primary Indicators (minimum of one required; check all that apply)							
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )				
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )				
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)		<input checked="" type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )				
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)				
<b>Field Observations:</b>			<b>Wetland Hydrology Present?</b>				
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>					
Saturation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>					
(includes capillary fringe)							
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>							
<b>Remarks:</b> Oxidized rhizospheres observed within soil, hydrology present							

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Point: 002-2 Feature ID: U001-2  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/19/2019  
 Investigator(s): JA/ZB Section, Township, Range: 1, T43N, R13E  
 Local relief (hillside, terrace, etc.): Toe Slope Local Relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): D Lat: 41.58999 Long: -120.42757 Datum: NAD 83  
 Soil Map Unit Name: (121) Daphnedale stony loam, 30 to 50 percent slopes NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Area dominated by upland vegetation. Hydrology and hydric soil indicators not met. Area is not a wetland. Data point part of segments A and B

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1 Sallas	Salix lasiandra	30	YES	FACW
2				
3				
4				
5				
		30	= Total Cover	

Herb Stratum (Plot size: <u>    </u> )				
1 Aggig	Agrostis gigantea	30	YES	FACW
2 Alysism	Alyssum symplex	20	YES	UPL
3 Tradub	Traigopogon dubius	15	YES	UPL
4 Epicil	Epilobium ciliatum	2	NO	FACW
5 Alysism	Alyssum symplex	5	NO	UPL
6				
7				
8				
9				
10				
11				
		72	= Total Cover	

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		0	= Total Cover	

%Bare Ground in Herb Stratum:      % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant  
Species Across All Strata: 4 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 50% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	0 x 1 = 0
FACW species	62 x 2 = 124
FAC species	0 x 3 = 0
FACU species	0 x 4 = 0
UPL species	40 x 5 = 200
Column Totals:	102 (A) 324 (B)
Prevalence Index = B/A = 3.1765	

### Hydrophytic Vegetation Indicators:

- No 1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation  
Present?

Yes      No X

Remarks: Area dominated by upland vegetation.

SOIL							Sampling Point: 002-2	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 3/3	100					Sandy loam	Gravelly
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: <u>Compacted roadbase gravel</u>								
Depth (inches): <u>4</u>						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> No hydric soil indicators. Soil contains 40 percent gravel. Suspected unnatural fill.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>						
(includes capillary fringe)						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators met.								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Point: 004-2 Feature ID: W002-2  
 Applicant/Owner: Zayo Group State: CA Sampling Date: 8/19/2019  
 Investigator(s): JA/ZB Section, Township, Range: 1, T43N, R13E  
 Local relief (hillside, terrace, etc.): Floodplain Local Relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): D Lat: 41.59388 Long: -120.42273 Datum: NAD 83  
 Soil Map Unit Name: (155) Lorella loam, 5 to 30 percent slopes NWI classification: PSSE  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No       
 Is the Sampled Area within a Wetland? Yes x No     

Remarks: All three indicators met, area is a wetland.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: <u>15' radius</u> )				
1 Sallas	Salix lasiandra	30	YES	FACW
2 Sallas2	Salix lasiolepis	30	YES	FACW
3				
4				
5				
		<u>60</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>5' radius</u> )				
1 Roswoo	Rosa woodsii	15	NO	FACU
2 Urt dio	Urtica dioica	10	NO	FAC
3 Agrgig	Agrostis gigantea	70	YES	FACW
4				
5				
6				
7				
8				
9				
10				
11				
		<u>95</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

% Bare Ground in Herb Stratum:      % Cover of Biotic Crust:     

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>130</u>	x 2 =	<u>260</u>
FAC species <u>10</u>	x 3 =	<u>30</u>
FACU species <u>15</u>	x 4 =	<u>60</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>155</u> (A)		<u>350</u> (B)
Prevalence Index = B/A = <u>2.2581</u>		

## Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Hydrophytic vegetation (FACW) dominant.

SOIL							Sampling Point: 004-2	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 4/2	100					Silty loam	
4-18	10YR 4/2	95	7.5YR 6/8	5	C	PL	Silty Loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input checked="" type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Hydric soil indicator Depleted Matrix present.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicator oxidized rhizospheres observed within soil.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Feature ID: U002-2  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/19/2019  
 Investigator(s): JA/ZB Section, Township, Range: 1, 43N, R13E  
 Local relief (hillside, terrace, etc.): Toe Slope Local Relief (concave, convex, none): None Slope (%): 8  
 Subregion (LRR): D Lat: 41.59389 Long: -120.42287 Datum: NAD 83  
 Soil Map Unit Name: (155) Lorella loam, 5 to 30 percent slopes NWI classification: PSSE  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: All three indicators not met, area is not a wetland.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1 Sallas2	Salix lasiolepis	10	YES	FACW
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		10	= Total Cover	
Herb Stratum	(Plot size: _____)			
1 Agrgig	Agrostis gigantea	70	YES	FACW
2 Alysym	Alyssum symplex	5	NO	UPL
3 Tradub	Traigopogon dubious	10	NO	UPL
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		85	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum:      % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant  
Species Across All Strata: 2 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>80</u>	x 2 = <u>160</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>15</u>	x 5 = <u>75</u>
Column Totals: <u>95</u> (A)	<u>235</u> (B)
Prevalence Index = B/A = <u>2.4737</u>	

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation  
Present?

Yes      No X

Remarks: Hydrophytic vegetation dominant.

SOIL							Sampling Point: 005-2	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR 4/2	100					Silty loam	Gravelly
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b> Type: _____ Compacted roadbase gravel Depth (inches): _____ 5						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Hydric soil indicators not observed. No redoximorphic features observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)						Secondary Indicators (2 or more required)		
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Feature ID: W003a-2  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/19/2019  
 Investigator(s): JA/ZB Section, Township, Range: 1, T43N, R13E  
 Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): D Lat: 41.59703 Long: -120.42274 Datum: NAD 83  
 Soil Map Unit Name: (123) Dephnedale very cobbly loam, deep variant, 5 to 15 percent slopes NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No       
 Is the Sampled Area within a Wetland? Yes x No     

Remarks: All three indicators met, area is a wetland. Data form part of segments A and B.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>5 ft x 5 ft</u> )				
1 <u>Poapra</u>	<u>Poa pratensis</u>	<u>70</u>	<u>YES</u>	<u>FAC</u>
2 <u>Junbal</u>	<u>Juncus balticus</u>	<u>10</u>	<u>NO</u>	<u>FACW</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>80</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum:      % Cover of Biotic Crust:     

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>10</u>	x 2 =	<u>20</u>
FAC species <u>70</u>	x 3 =	<u>210</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>80</u> (A)		<u>230</u> (B)
Prevalence Index = B/A = <u>2.875</u>		

## Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Hydrophytic vegetation dominant.



SOIL		Sampling Point: 006-02						
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 3/2	100					Sandy loam	
8-18	10YR 4/1	60	10YR 3/3	35	C	M	Sandy loam	
			7.5YR 5/6	5	C	PL		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <span style="float: right;"><sup>2</sup>Location: PL=Pore Lining, M=Matrix.</span>								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)					
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)					
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input checked="" type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____					<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
<b>Remarks:</b> Hydric soil indicator Depleted Matrix (F3) met.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>			
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)			<input checked="" type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input checked="" type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)			
<input checked="" type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (includes capillary fringe)		Depth (inches): _____						
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Wetland hydrology indicators present including surface soil cracks, oxidized rhizospheres, and drainage patterns.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Point: 007-2 Feature ID: U003-2  
Applicant/Owner: Zayo Group State: California Sampling Date: 8/19/2019  
Investigator(s): JA/ZB Section, Township, Range: 1, T43N, R13E  
Local relief (hillside, terrace, etc.): Toe Slope Local Relief (concave, convex, none): None Slope (%): 5  
Subregion (LRR): D Lat: 41.59703 Long: -120.42281 Datum: NAD 83  
Soil Map Unit Name: (123) Daphnedale very cobbly loam, deep variant, 5 to 15 percent slopes NWI classification: PEM  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x  
Hydric Soil Present? Yes      No x  
Wetland Hydrology Present? Yes      No x  
Is the Sampled Area within a Wetland? Yes      No x

Remarks: Upland pair point to W003a-2. All three indicators not met, area is not a wetland. Data form part of segments A and B

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		0		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: <u>15x15ft</u> )				
1	Artlud	20	YES	FACU
2	Artemisia ludoviciana			
3				
4				
5				
		20		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>5x5ft</u> )				
1	Lacser	30	YES	FACU
2	Pertri	10	YES	UPL
3	Brotec	10	YES	UPL
4				
5				
6				
7				
8				
9				
10				
11				
		50		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		0		= Total Cover

%Bare Ground in Herb Stratum:      % Cover of Biotic Crust:     

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	0 x 1 =	0
FACW species	0 x 2 =	0
FAC species	0 x 3 =	0
FACU species	50 x 4 =	200
UPL species	20 x 5 =	100
Column Totals:	70 (A)	300 (B)
Prevalence Index = B/A = <u>4.2857</u>		

## Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation No  
2 - Dominance Test is >50% No  
3 - Prevalence Index is ≤3.0<sup>1</sup> No  
4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
5 - Wetland Non-Vascular Plants<sup>1</sup>  
6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Area dominated by upland vegetation.

SOIL							Sampling Point: 007-2	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR 5/3	100					Sandy loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)					
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)					
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b> Type: <u>Compact roadbase gravel</u> Depth (inches): <u>5</u>						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Hydric soil indicators not met. No redoximorphic features observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)						Secondary Indicators (2 or more required)		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Feature ID: W005a-2  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/19/2019  
 Investigator(s): JA/ZB Section, Township, Range: 36, T44N, R13E  
 Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR): D Lat: 41.61363 Long: -120.41689 Datum: NAD 83  
 Soil Map Unit Name: (126) Delma loam, 15 to 30 percent slopes, eroded NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No       
 Is the Sampled Area within a Wetland? Yes x No     

Remarks: All three indicators met, area is a wetland. Segments A, B, and C have same characteristics.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

Sapling/Shrub Stratum (Plot size: <u>15' radius</u> )	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
1	Sallas <u>Salix lasiandra</u>	30	YES	FACW
2	Sallas2 <u>Salix lasiolepis</u>	10	YES	FACW
3				
4				
5				
		<u>40</u>		= Total Cover

Herb Stratum (Plot size: <u>5' radius</u> )	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
1	Alopra <u>Alopecurus pratensis</u>	30	YES	FACW
2	Scimic <u>Scirpus microcarpus</u>	30	YES	OBL
3	Menarv <u>Mentha arvensis</u>	15	NO	FACW
4	Carneb <u>Carex nebrascensis</u>	10	NO	OBL
5				
6				
7				
8				
9				
10				
11				
		<u>85</u>		= Total Cover

Woody Vine Stratum (Plot size: <u>    </u> )	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum:      % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)  
 Total Number of Dominant Species Across All Strata: 4 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>40</u>	x 1 =	<u>40</u>
FACW species <u>85</u>	x 2 =	<u>170</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>125</u> (A)		<u>210</u> (B)
Prevalence Index = B/A = <u>1.68</u>		

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Hydrophytic vegetation (OBL & FACW) dominant.

SOIL							Sampling Point: 008-2	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 4/1	85	10YR 4/6	15	C	M	Loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
						<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: _____ Rock _____ Depth (inches): _____ 6 _____						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Refusal at 6". Hydric soil indicator Depleted Matrix observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input checked="" type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input checked="" type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ 1 _____ (includes capillary fringe)						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicators observed include oxidized rhizospheres, saturation, water marks, and sediment deposits.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Point: 009-2 Feature ID: U005-2  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/19/2019  
 Investigator(s): JA/ZB Section, Township, Range: 36, T44N, R13E  
 Local relief (hillside, terrace, etc.): Foot Slope Local Relief (concave, convex, none): None Slope (%): 1  
 Subregion (LRR): D Lat: 41.6136 Long: -120.41691 Datum: NAD 83  
 Soil Map Unit Name: (126) Delma laom, 15 to 30 percent slopes, eroded NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W005a-2. Hydrophytic vegetation dominant; however, no hydric soil or wetland hydrology indicators are present.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1 Sallas2	Salix lasiolepis	10	YES	FACW
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		10	= Total Cover	
Herb Stratum	(Plot size: _____)			
1 Poapra	Poa pratensis	15	NO	FAC
2 Lacser	Lactuca serriola	10	NO	FACU
3 Equulae	Equisetum laevigatum	20	YES	FACW
4 Erinau	Ericamera nauseosa	25	YES	UPL
5 Brotec	Bromus tectorum	10	NO	UPL
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		80	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum:      % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>30</u>	x 2 = <u>60</u>
FAC species <u>15</u>	x 3 = <u>45</u>
FACU species <u>10</u>	x 4 = <u>40</u>
UPL species <u>35</u>	x 5 = <u>175</u>
Column Totals: <u>90</u> (A)	<u>320</u> (B)
Prevalence Index = B/A = <u>3.5556</u>	

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Area dominated by hydrophytic vegetation. Vegetation passes the dominance test.

SOIL							Sampling Point: 009-2	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 5/3	100					Sandy loam	Gravelly
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: <u>Compacted roadbase gravel</u>								
Depth (inches): <u>4</u>						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Hydric soil indicators not met. No redoximorphic features observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>						
(includes capillary fringe)						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Point: 014-2 Feature ID: W007a-2  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/20/2019  
 Investigator(s): TK, ZB Section, Township, Range: 19, T44N, R14E  
 Local relief (hillside, terrace, etc.): Agriculture field Local Relief (concave, convex, none): None Slope (%): 2  
 Subregion (LRR): D Lat: 41.64371 Long: -120.39906 Datum: NAD 83  
 Soil Map Unit Name: (192) Thoms-Exel complex NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No ☐  
 Hydric Soil Present? Yes ☒ No ☐  
 Wetland Hydrology Present? Yes ☒ No ☐  
 Is the Sampled Area within a Wetland? Yes ☒ No ☐

Remarks: Wetland is dominated by Juncus. Hydrophytic vegetation dominant and hydrology indicators present. Soils problematic and discussed below.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: _____)				
1				
2				
3				
4				
5				
		0	= Total Cover	

Herb Stratum (Plot size: 1 m radius)				
1 Junbal	Juncus balticus	70	YES	FACW
2 Carneb	Carex nebrascensis	20	YES	OBL
3 Alopra	Alopecurus pratensis	10	NO	FACW
4				
5				
6				
7				
8				
9				
10				
11				
		100	= Total Cover	

Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust: \_\_\_\_\_

## Dominance Test worksheet:

Number of Dominant Species  
 That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant  
 Species Across All Strata: 2 (B)

Percent of Dominant Species  
 That Are OBL, FACW, or FAC: 100% (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species 20	x 1 =	20
FACW species 80	x 2 =	160
FAC species 0	x 3 =	0
FACU species 0	x 4 =	0
UPL species 0	x 5 =	0
Column Totals: 100 (A)		180 (B)
Prevalence Index = B/A = 1.8		

## Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
 Yes 2 - Dominance Test is >50%  
 Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
 Vegetation  
 Present?

Yes ☒ No ☐

Remarks: Area dominated by hydrophytic vegetation (FACW & OBL).



SOIL							Sampling Point: 014-2	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	7.5YR 2.5/1						Clay loam	
4-12	10YR 4/3	95	5YR 4/6	5	C	M	Clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input checked="" type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Soil profile observed did not have hydric soil indicators; however, soils are assumed hydric and problematic due to low chroma potentially obscuring redox features, and strong vegetation and hydrology indicators observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input checked="" type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Area has wetland hydrology indicators present; water stained leaves, FAC- neutral test and drainage patterns.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Point: 015-2 Feature ID: U007-2  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/9/2019  
 Investigator(s): TK, ZB. Section, Township, Range: 19, T44N, R14E  
 Local relief (hillside, terrace, etc.): Agriculture field Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 41.64373 Long: -120.39908 Datum: NAD 83  
 Soil Map Unit Name: (192) Thoms-Exel complex NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes      No x  
 Wetland Hydrology Present? Yes      No x  
 Is the Sampled Area within a Wetland? Yes      No x

Remarks: Upland pair point to W007a-2 (014-2) was dominated by Equisetum. Though area was dominated by hydrophytic vegetation, both soil and hydrology indicators were not observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>1 m</u> )				
1	<u>Equlae Equisetum laevigatum</u>	<u>60</u>	<u>YES</u>	<u>FACW</u>
2	<u>Melalb Melilotus alba</u>	<u>15</u>	<u>NO</u>	<u>UPL</u>
3	<u>Poapra Poa pratensis</u>	<u>5</u>	<u>NO</u>	<u>FAC</u>
4	<u>Fesper Festuca perennis</u>	<u>2</u>	<u>NO</u>	<u>UPL</u>
5	<u>Tradub Traigopogon dubius</u>	<u>5</u>	<u>NO</u>	<u>UPL</u>
6	<u>Brotec Bromus tectorum</u>	<u>2</u>	<u>NO</u>	<u>UPL</u>
7				
8				
9				
10				
11				
		<u>89</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum:      % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>60</u>	x 2 =	<u>120</u>
FAC species <u>5</u>	x 3 =	<u>15</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>24</u>	x 5 =	<u>120</u>
Column Totals: <u>89</u> (A)		<u>255</u> (B)
Prevalence Index = B/A = <u>2.8652</u>		

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Area dominated by hydrophytic vegetation.

SOIL							Sampling Point: 015-2	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-7	10 yr 3/2	100					Sand	
7-14	10 yr 7/2	100					Sand	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Hydric soil indicators were not observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)						Secondary Indicators (2 or more required)		
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Wetland hydrology indicators were not observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/20/2019

Applicant/Owner: Zayo Group State: California Sampling Point: 50-2 Feature ID: W50-2

Investigator(s): MO, JA Section, Township, Range: \_\_\_\_\_

Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR): D Lat: 41.66245 Long: -120.38917 Datum: NAD83

Soil Map Unit Name: (176) Pit silty clay loam, 0 to 2 percent slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? \_\_\_\_\_ Are "Normal Circumstances" present? Yes X No \_\_\_\_\_

Are Vegetation No, Soil No, or Hydrology No naturally problematic? \_\_\_\_\_ (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No \_\_\_\_\_

Hydric Soil Present? Yes x No \_\_\_\_\_

Wetland Hydrology Present? Yes x No \_\_\_\_\_

Is the Sampled Area within a Wetland? Yes x No \_\_\_\_\_

## Evaluation of features designated "Other Waters"

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_

Indicators: Defined bed and bank: \_\_\_\_\_ Scour \_\_\_\_\_ OHWM Mapped \_\_\_\_\_

Feature Designation: Perennial \_\_\_\_\_ Intermittent \_\_\_\_\_ Ephemeral \_\_\_\_\_

Natural Drainage \_\_\_\_\_ Artificial Drainage \_\_\_\_\_ Navigable Water \_\_\_\_\_

Remarks: Wetland parameters are present as indicated by hydrology indicators, hydric soil indicator (F3), and a dominance of hydrophytic vegetation.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev. Species Name Absolute Dominant Indicator  
Tree Stratum (Plot size: 30' radius) % Cover Species? Status

1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)

1				
2				
3				
4				
5				
		0	= Total Cover	

Herb Stratum (Plot size: 5' radius)

1	Carneb	Carex nebrascensis	70	YES	OBL
2	Junens	Juncus ensifolius	20	YES	FACW
3	Epitor	Epilobium torreyi	5	NO	FACW
4					
5					
6					
7					
8					
9					
10					
11					
		95	= Total Cover		

Woody Vine Stratum (Plot size: \_\_\_\_\_)

1				
2				
		0	= Total Cover	

% Bare Ground in Herb 5 % Cover of Biotic \_\_\_\_\_

## Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant  
Species Across All Strata: 2 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 1 (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	70	x 1 = 70
FACW species	25	x 2 = 50
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	95	(A)
Prevalence Index = B/A		120 (B)
		1.2632

## Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is  $\leq 3.0$ <sup>1</sup>  
4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
5 - Wetland Non-Vascular Plants<sup>1</sup>  
6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## Hydrophytic Vegetation Present?

Yes X No \_\_\_\_\_

Remarks: Hydrophytic vegetation present as indicated by a dominance of OBL and FACW species.

SOIL		Sampling Point:		50-2	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)					
Depth (inches)	Matrix	Redox Features			
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup> Loc <sup>2</sup> Texture Remarks
0-16	10 YR 4/1	95	5 YR 5/4	5	C PL Loamy clay Prominent redox concentrations
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.					
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)					
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	Indicators for Problematic Hydric Soils <sup>3</sup> :			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Reduced Vertic (F18)			
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Red Parent Material (TF2)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.			
Restrictive Layer (if present):			Hydric Soil Present?		
Type: <input type="text"/> None			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Depth (inches): <input type="text"/> None					
Remarks: Hydric soil indicators are observed and meet indicators of F3 Depleted Matrix, with indicators of a soil that is at least 6 inches thick starting in the top 10 inches of soil surface, with redox concentrations (soft masses or pore linings), in a matrix with a value of 4 or more and chroma of 2 or less.					
HYDROLOGY					
Wetland Hydrology Indicators:			Secondary Indicators (2 or more required)		
Primary Indicators (minimum of one required; check all that apply)					
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)			
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)			
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)			
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)			
Field Observations:			Wetland Hydrology Present?		
Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<input type="text"/> 0		
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<input type="text"/> 1		
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<input type="text"/> 1		
(includes capillary fringe)			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks: Hydrology indicators present as evidenced by high water table, surface water, and saturation.					

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/20/2019

Applicant/Owner: Zayo Group State: California Sampling Point: 51-2 Feature ID: U50-2

Investigator(s): MO, JA Section, Township, Range: 8, T44N, R14E

Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR): D Lat: 41.66241 Long: -120.38922 Datum: NAD83

Soil Map Unit Name: (176) Pit silty clay loam, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x

Hydric Soil Present? Yes x No     

Wetland Hydrology Present? Yes      No x

Is the Sampled Area within a Wetland? Yes      No x

## Evaluation of features designated "Other Waters"

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

Remarks: Sample point lacks indicators of wetland hydrology and dominance of wetland vegetation. Upland pair point to W50-2.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev. Species Name Absolute Dominant Indicator  
Tree Stratum (Plot size: 30' radius) % Cover Species? Status

1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)

1	Roswoo	Rosa woodsii	10	YES	FACU
2					
3					
4					
5					
		10	= Total Cover		

Herb Stratum (Plot size: 5' radius)

1	Phlpra	Phleum pratense	25	YES	FACU
2	Lacser	Lactuca serriola	20	YES	FACU
3	Tradub	Tragopogon dubius	15	YES	UPL
4					
5					
6					
7					
8					
9					
10					
11					
		60	= Total Cover		

Woody Vine Stratum (Plot size:     )

1				
2				
		0	= Total Cover	

% Bare Ground in Herb 40 % Cover of Biotic     

## Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant  
Species Across All Strata: 4 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A/B)

## Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	55	x 4 =	220
UPL species	15	x 5 =	75
Column Totals:	70	(A)	295 (B)
Prevalence Index = B/A =		4.2143	

## Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- No 2 - Dominance Test is >50%
- No 3 - Prevalence Index is  $\leq 3.0$ <sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants<sup>1</sup>
- 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## Hydrophytic Vegetation Present?

Yes      No X

Remarks: Sample point dominated by FACU and UPL vegetation.

SOIL							Sampling Point:		51-2	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)		Matrix		Redox Features			Texture	Remarks		
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>				
0-8	10 YR 2/1	100					Clay loam			
8-16	10 YR 2/1	98	10 YR 5/3	2	C	M	Clay			
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)										
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			Indicators for Problematic Hydric Soils <sup>3</sup> :				
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )				
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )				
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)				
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)				
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> X Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)							
<input type="checkbox"/> Sandy Gleyed Matrix (S4)										
						<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
Restrictive Layer (if present):						Hydric Soil Present?				
Type: _____ None _____										
Depth (inches): _____ None _____						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: Soils meet the requirements of hydric soil indicator Redox Dark Surface (F6).										
HYDROLOGY										
Wetland Hydrology Indicators:						Secondary Indicators (2 or more required)				
Primary Indicators (minimum of one required; check all that apply)										
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )				
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )				
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )				
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)				
Field Observations:						Wetland Hydrology Present?				
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> X		Depth (inches): _____								
Water Table Present? Yes _____ No <input checked="" type="checkbox"/> X		Depth (inches): _____								
Saturation Present? Yes _____ No <input checked="" type="checkbox"/> X		Depth (inches): _____								
(includes capillary fringe)						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:										
Remarks: No hydrology indicators observed.										

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/20/2019

Applicant/Owner: Zayo Group State: California Sampling Point: 57-2 Feature ID: W55-2

Investigator(s): MO, JA Section, Township, Range: 5, T44N, R14E

Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR): D Lat: 41.68535 Long: -120.3771 Datum: NAD83

Soil Map Unit Name: (137) Drews clay loam, 2 to 5 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No     

Hydric Soil Present? Yes x No     

Wetland Hydrology Present? Yes x No     

Is the Sampled Area within a Wetland? Yes x No     

## Evaluation of features designated "Other Waters"

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

Remarks: Wetland parameters are present as indicated by hydrology indicators, hydric soil indicator (F3), and a dominance of hydrophytic vegetation.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev. Species Name Absolute Dominant Indicator  
Tree Stratum (Plot size: 30' radius) % Cover Species? Status

1                           
2                           
3                           
4                           
0 = Total Cover

Sapling/Shrub Stratum (Plot size: 15' radius)

1                           
2                           
3                           
4                           
5                           
0 = Total Cover

Herb Stratum (Plot size: 5' radius)

1 Carneb Carex nebrascensis 90 YES OBL  
2 Alopra Alopecurus pratensis 10 NO FACW  
3                           
4                           
5                           
6                           
7                           
8                           
9                           
10                           
11                           
100 = Total Cover

Woody Vine Stratum (Plot size:     )

1                           
2                           
0 = Total Cover

% Bare Ground in Herb 0 % Cover of Biotic     

## Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant  
Species Across All Strata: 1 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 1 (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>90</u>	x 1 =	<u>90</u>
FACW species <u>10</u>	x 2 =	<u>20</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>100</u> (A)		<u>110</u> (B)
Prevalence Index = B/A =		<u>1.1</u>

## Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
5 - Wetland Non-Vascular Plants<sup>1</sup>  
6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## Hydrophytic Vegetation Present?

Yes X No     

Remarks: Hydrophytic vegetation present as indicated by a dominance of OBL species.



SOIL		Sampling Point: 57-2						
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10 YR 4/1	98	10 YR 5/4	2	C	M	Silty loam	Prominent redox concentrations
2-16	10 YR 4/1	90	10 YR 6/8	10	C	PL	Silty loam	Prominent redox concentrations
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>4</sup> Location: PL=Pore Lining, M=Matrix.								
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)								
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)			Indicators for Problematic Hydric Soils <sup>3</sup> :				
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) (LRR C)				
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) (LRR B)				
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)				
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input checked="" type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)				
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)							
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
Restrictive Layer (if present):				Hydric Soil Present?				
Type: <input type="text"/> None				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Depth (inches): <input type="text"/> None								
Remarks: Hydric soil indicators are observed and meet indicators of F3 Depleted Matrix, with indicators of a soil that is at least 6 inches thick starting in the top 10 inches of soil surface, with redox concentrations (soft masses or pore linings), in a matrix with a value of 4 or more and chroma of 2 or less.								
HYDROLOGY								
Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)				
Primary Indicators (minimum of one required; check all that apply)				<input type="checkbox"/> Water Marks (B1) (Riverine)				
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Sediment Deposits (B2) (Riverine)				
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Drift Deposits (B3) (Riverine)				
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)				
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)							
Field Observations:				Wetland Hydrology Present?				
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>					
Saturation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>					
(includes capillary fringe)								
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks: Hydrology indicators present as evidenced by water stained leaves, and presence of vegetation matting.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/20/2019

Applicant/Owner: Zayo Group State: California Sampling Point: 58-2 Feature ID: U55-2

Investigator(s): MO, JA Section, Township, Range: 5, T44N, R14E

Local relief (hillside, terrace, etc.): Roadside slope Local Relief (concave, convex, none): Convex Slope (%): 5

Subregion (LRR): D Lat: 41.68534 Long: -120.37716 Datum: NAD83

Soil Map Unit Name: (137) Drews clay loam, 2 to 5 percent slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x

Hydric Soil Present? Yes      No x

Wetland Hydrology Present? Yes      No x

Is the Sampled Area within a Wetland? Yes      No x

## Evaluation of features designated "Other Waters"

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

Remarks: Sample point lacks all indicators of wetland parameters. Upland pair point to W55-2.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev. Species Name Absolute Dominant Indicator  
Tree Stratum (Plot size: 30' radius) % Cover Species? Status

1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)

1				
2				
3				
4				
5				
		0	= Total Cover	

Herb Stratum (Plot size: 5' radius)

1	THIINT	Thinopyrum intermedium	80	YES	UPL
2	Phlpra	Phleum pratense	10	NO	FACU
3	Tradub	Tragopogon dubius	2	NO	UPL
4					
5					
6					
7					
8					
9					
10					
11					
		92	= Total Cover		

Woody Vine Stratum (Plot size:     )

1				
2				
		0	= Total Cover	

% Bare Ground in Herb 8 % Cover of Biotic     

## Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant  
Species Across All Strata: 1 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	10	x 4 = 40
UPL species	82	x 5 = 410
Column Totals:	92	(A)
Prevalence Index = B/A =		4.8913 (B)

## Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
  - No 2 - Dominance Test is >50%
  - No 3 - Prevalence Index is  $\leq 3.0$ <sup>1</sup>
  - 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
  - 5 - Wetland Non-Vascular Plants<sup>1</sup>
  - 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## Hydrophytic Vegetation Present?

Yes      No X

Remarks: Sample point dominated by UPL vegetation.

SOIL							Sampling Point: 58-2	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10 YR 4/4	100					Silty loam	Gravel throughou

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.
<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

**Indicators for Problematic Hydric Soils<sup>3</sup>:**  
☐ 1 cm Muck (A9) (**LRR C**)  
☐ 2 cm Muck (A10) (**LRR B**)  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (TF2)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**  
 Type: Compacted road base.  
 Depth (inches): 4

**Hydric Soil Present?**  
 Yes ☐ No ☒

**Remarks:** Soil point lacks hydric soil indicators.

**HYDROLOGY**

**Wetland Hydrology Indicators:**  
**Primary Indicators (minimum of one required; check all that apply)**

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)

**Secondary Indicators (2 or more required)**

<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )
<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**  
 Surface Water Present? Yes ☐ No ☒ Depth (inches):             
 Water Table Present? Yes ☐ No ☒ Depth (inches):             
 Saturation Present? Yes ☐ No ☒ Depth (inches):             
 (includes capillary fringe)

**Wetland Hydrology Present?**  
 Yes ☐ No ☒

**Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:** No hydrology indicators observed.

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/20/2019

Applicant/Owner: Zayo Group State: California Sampling Point: 59-2 Feature ID: W59-2

Investigator(s): MO, JA Section, Township, Range: 18, T44N, R14E

Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR): D Lat: 41.65999 Long: -120.39052 Datum: NAD83

Soil Map Unit Name: (176) Pit silty clay loam, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No     

Hydric Soil Present? Yes x No     

Wetland Hydrology Present? Yes x No     

Is the Sampled Area within a Wetland? Yes x No     

## Evaluation of features designated "Other Waters"

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

Remarks: Wetland indicated by hydrology indicators and a dominance of hydrophytic vegetation. Soils do not satisfy any hydric soil indicators; however, due to influences in drainages of nearby agricultural the soils appear to be problematic.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev. Species Name Absolute Dominant Indicator  
Tree Stratum (Plot size: 30' radius) % Cover Species? Status

1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)

1				
2				
3				
4				
5				
		0	= Total Cover	

Herb Stratum (Plot size: 5' radius)

1	Junbal	Juncus balticus	60	YES	FACW
2	Rumoec	Rumex occidentalis	15	NO	FACW
3	Carneb	Carex nebrascensis	15	NO	OBL
4	Phlpra	Phleum pratense	5	NO	FACU
5					
6					
7					
8					
9					
10					
11					
		95	= Total Cover		

Woody Vine Stratum (Plot size:     )

1				
2				
		0	= Total Cover	

% Bare Ground in Herb 5 % Cover of Biotic     

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	15	x 1 = 15
FACW species	75	x 2 = 150
FAC species	0	x 3 = 0
FACU species	5	x 4 = 20
UPL species	0	x 5 = 0
Column Totals:	95	(A)
	185	(B)
Prevalence Index = B/A =		1.9474

## Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is  $\leq 3.0$ <sup>1</sup>  
4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
5 - Wetland Non-Vascular Plants<sup>1</sup>  
6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## Hydrophytic Vegetation Present?

Yes X No     

Remarks: Hydrophytic vegetation present as indicated by a dominance of FACW species.

SOIL							Sampling Point:	59-2
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-1	10 YR 2/2	100					Sandy loam	
1-16	10 YR 4/2	65					Sandy clay loam	
	10 YR 3/2	35						
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <span style="float: right;"><sup>2</sup>Location: PL=Pore Lining, M=Matrix.</span>								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input checked="" type="checkbox"/> Other (Explain in Remarks)		
						<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<b>Restrictive Layer (if present):</b>					<b>Hydric Soil Present?</b>			
Type: <u>None</u> Depth (inches): <u>None</u>					Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
<b>Remarks:</b> Hydric soil indicators are not observed; however, due to other wetland parameters and dark matrix, it is assumed that the soils are hydric and have been altered due to irrigation runoff from nearby agriculture and potential influence from roadway.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>			
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )				
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )				
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )				
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)				
<input checked="" type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)				
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </u> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </u> (includes capillary fringe)					Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicators present as evidenced by the presence of vegetation matting in the form of drift deposits on the depression of the wetland.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/20/2019

Applicant/Owner: Zayo Group State: California Sampling Point: 60-2 Feature ID: U59-2

Investigator(s): MO, JA Section, Township, Range: 18, T44N, R14E

Local relief (hillside, terrace, etc.): Roadside slope Local Relief (concave, convex, none): Convex Slope (%): 2

Subregion (LRR): D Lat: 41.66002 Long: -120.39054 Datum: NAD83

Soil Map Unit Name: (176) Pit silty clay loam, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x

Hydric Soil Present? Yes      No x

Wetland Hydrology Present? Yes      No x

Is the Sampled Area within a Wetland? Yes      No x

## Evaluation of features designated "Other Waters"

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

Remarks: Sample point lacks all indicators of wetland parameters; sample point is within roadside prism at wetland boundary. Upland pair point to W59-2.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev. Species Name Absolute Dominant Indicator  
Tree Stratum (Plot size: 30' radius) % Cover Species? Status

1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)

1				
2				
3				
4				
5				
		0	= Total Cover	

Herb Stratum (Plot size: 5' radius)

1	Poasec	Poa secunda	50	YES	FACU
2	Madgra	Madia gracilis	5	NO	UPL
3	Tradub	Tragopogon dubius	5	NO	UPL
4	Phlpra	Phleum pratense	20	YES	FACU
5					
6					
7					
8					
9					
10					
11					
		80	= Total Cover		

Woody Vine Stratum (Plot size:     )

1				
2				
		0	= Total Cover	

% Bare Ground in Herb 20 % Cover of Biotic     

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	70	x 4 = 280
UPL species	10	x 5 = 50
Column Totals:	80	(A)
Prevalence Index = B/A =		4.125 (B)

## Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
  - No 2 - Dominance Test is >50%
  - No 3 - Prevalence Index is  $\leq 3.0$ <sup>1</sup>
  - 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
  - 5 - Wetland Non-Vascular Plants<sup>1</sup>
  - 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## Hydrophytic Vegetation Present?

Yes ☐ No ☒

Remarks: Sample point dominated by FACU vegetation.

[illegible]

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/20/2019

Applicant/Owner: Zayo Group State: California Sampling Point: 61-2 Feature ID: W60-2

Investigator(s): MO, JA Section, Township, Range: 18, T44N, R14E

Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR): D Lat: 41.65861 Long: -120.39121 Datum: NAD83

Soil Map Unit Name: (176) Pit silty clay loam, 0 to 2 percent slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No     

Hydric Soil Present? Yes x No     

Wetland Hydrology Present? Yes x No     

Is the Sampled Area within a Wetland? Yes x No     

## Evaluation of features designated "Other Waters"

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

Remarks: Wetland parameters are present as indicated by hydrology indicators, hydric soil indicator (F3), and a dominance of hydrophytic vegetation.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev. Species Name Absolute Dominant Indicator  
Tree Stratum (Plot size: 30' radius) % Cover Species? Status

1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)

1				
2				
3				
4				
5				
		0	= Total Cover	

Herb Stratum (Plot size: 5' radius)

1	<u>Alopra</u>	<u>Alopecurus pratensis</u>	<u>85</u>	<u>YES</u>	<u>FACW</u>
2	<u>Junbal</u>	<u>Juncus balticus</u>	<u>10</u>	<u>NO</u>	<u>FACW</u>
3					
4					
5					
6					
7					
8					
9					
10					
11					
		95	= Total Cover		

Woody Vine Stratum (Plot size:     )

1				
2				
		0	= Total Cover	

% Bare Ground in Herb 5 % Cover of Biotic     

## Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant  
Species Across All Strata: 1 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 1 (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>95</u>	x 2 = <u>190</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>95</u> (A)	<u>190</u> (B)
Prevalence Index = B/A = <u>2</u>	

## Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is  $\leq 3.0$ <sup>1</sup>  
4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
5 - Wetland Non-Vascular Plants<sup>1</sup>  
6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## Hydrophytic Vegetation Present?

Yes X No     

Remarks: Hydrophytic vegetation present as indicated by a dominance of FACW species.



SOIL							Sampling Point:		61-2	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Matrix		Redox Features				Texture	Remarks		
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>				
0-4	10 YR 2/2	100					Loamy clay	Prominent redox concentrations		
4-16	10 YR 4/1	95	5 YR 5/8	5	C	M	Loamy clay			
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>										
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>						
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )						
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )						
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Reduced Vertic (F18)						
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )	<input checked="" type="checkbox"/>		<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Red Parent Material (TF2)						
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)						
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)							
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.							
<b>Restrictive Layer (if present):</b>			<b>Hydric Soil Present?</b>							
Type: _____ None			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>							
Depth (inches): _____ None										
<b>Remarks:</b> Hydric soil indicators are observed and meet indicators of F3 Depleted Matrix, with indicators of a soil that is at least 6 inches thick starting in the top 10 inches of soil surface, with redox concentrations (soft masses or pore linings), in a matrix with a value of 4 or more and chroma of 2 or less.										
<b>HYDROLOGY</b>										
<b>Wetland Hydrology Indicators:</b>			<b>Secondary Indicators (2 or more required)</b>							
Primary Indicators (minimum of one required; check all that apply)										
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )						
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )						
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )						
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)						
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)						
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)						
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)						
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)						
<input checked="" type="checkbox"/> X Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)						
<b>Field Observations:</b>			<b>Wetland Hydrology Present?</b>							
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Depth (inches): _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Depth (inches): _____							
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (includes capillary fringe)			Depth (inches): _____							
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>										
<b>Remarks:</b> Hydrology indicators present as evidenced by water stained leaves, and presence of vegetation matting.										

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/20/2019

Applicant/Owner: Zayo Group State: California Sampling Point: 62-2 Feature ID: U60-2

Investigator(s): MO, JA Section, Township, Range: 18, T44N, R14E

Local relief (hillside, terrace, etc.): Roadside slope Local Relief (concave, convex, none): Convex Slope (%): 3

Subregion (LRR): D Lat: 41.65863 Long: -120.39127 Datum: NAD83

Soil Map Unit Name: (176) Pit silty clay loam, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x

Hydric Soil Present? Yes      No x

Wetland Hydrology Present? Yes      No x

Is the Sampled Area within a Wetland? Yes      No x

## Evaluation of features designated "Other Waters"

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

Remarks: Sample point lacks all indicators of wetland parameters. Upland pair point to W60-2.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev. Species Name Absolute Dominant Indicator  
Tree Stratum (Plot size: 30' radius) % Cover Species? Status

1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)

1				
2				
3				
4				
5				
		0	= Total Cover	

Herb Stratum (Plot size: 5' radius)

1	THIINT	Thinopyrum intermedium	40	YES	UPL
2	Phlpra	Phleum pratense	20	YES	FACU
3	Tradub	Tragopogon dubius	10	NO	UPL
4					
5					
6					
7					
8					
9					
10					
11					
		70	= Total Cover		

Woody Vine Stratum (Plot size:     )

1				
2				
		0	= Total Cover	

% Bare Ground in Herb      % Cover of Biotic     

## Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant  
Species Across All Strata: 2 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	20	x 4 = 80
UPL species	50	x 5 = 250
Column Totals:	70	(A) 330 (B)
Prevalence Index = B/A =		4.7143

## Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- No 2 - Dominance Test is >50%
- No 3 - Prevalence Index is  $\leq 3.0$ <sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants<sup>1</sup>
- 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## Hydrophytic Vegetation Present?

Yes      No X

Remarks: Sample point dominated by FACU and UPL vegetation.

[illegible]

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/21/2019

Applicant/Owner: Zayo Group State: California Sampling Point: 64-2 Feature ID: W61-2

Investigator(s): MO, JA Section, Township, Range: 5, T45N, R14E

Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR): D Lat: 41.769104 Long: -120.37527 Datum: NAD83

Soil Map Unit Name: (135) Drews gravelly loam, 0 to 9 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No     

Hydric Soil Present? Yes x No     

Wetland Hydrology Present? Yes x No     

Is the Sampled Area within a Wetland? Yes x No     

## Evaluation of features designated "Other Waters"

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

Remarks: Wetland parameters are present as indicated by hydrology indicator (saturation) and a dominance of hydrophytic vegetation, however soils are problematic and were determined hydric (see soil remarks).

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev. Species Name Absolute Dominant Indicator  
Tree Stratum (Plot size: 30' radius) % Cover Species? Status

1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)

1				
2				
3				
4				
5				
		0	= Total Cover	

Herb Stratum (Plot size: 5' radius)

1	Alopra	Alopecurus pratensis	45	YES	FACW
2	Rumeri	Rumex crispus	10	NO	FAC
3	Lotcor	Lotus corniculatus	5	NO	FAC
4					
5					
6					
7					
8					
9					
10					
11					
		60	= Total Cover		

Woody Vine Stratum (Plot size:     )

1				
2				
		0	= Total Cover	

% Bare Ground in Herb 40 % Cover of Biotic     

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	0	x 1 = 0
FACW species	45	x 2 = 90
FAC species	15	x 3 = 45
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	60	(A)
	135	(B)
Prevalence Index = B/A =		2.25

## Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
  - Yes 2 - Dominance Test is >50%
  - Yes 3 - Prevalence Index is  $\leq 3.0$ <sup>1</sup>
  - 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
  - 5 - Wetland Non-Vascular Plants<sup>1</sup>
  - 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## Hydrophytic Vegetation Present?

Yes X No     

Remarks: Hydrophytic vegetation present as indicated by a dominance of FACW species. Vegetation passes both dominance test and prevalence index

SOIL							Sampling Point:	64-2
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10 YR 2/2	100					Sandy loam	
2-10	10 YR 4/4	100					Sandy clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input checked="" type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>					<b>Hydric Soil Present?</b>			
Type: <u>Shovel refusal</u> Depth (inches): <u>10</u>					Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
<b>Remarks:</b> Roadside fill present in soil with gravel throughout. Soils are problematic due to gravel (i.e., non-native fill material) presence. Other positive wetland parameters indicate soil is hydric and therefore problematic due to anthropogenic influences.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>			
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)					<input type="checkbox"/> Salt Crust (B11)			
<input type="checkbox"/> High Water Table (A2)					<input type="checkbox"/> Biotic Crust (B12)			
<input checked="" type="checkbox"/> Saturation (A3)					<input checked="" type="checkbox"/> Aquatic Invertebrates (B13)			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )					<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )					<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )					<input type="checkbox"/> Presence of Reduced Iron (C4)			
<input type="checkbox"/> Surface Soil Cracks (B6)					<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)					<input type="checkbox"/> Thin Muck Surface (C7)			
<input type="checkbox"/> Water-Stained Leaves (B9)					<input checked="" type="checkbox"/> FAC-Neutral Test (D5)			
<input type="checkbox"/> Other (Explain in Remarks)								
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </u>								
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </u>								
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1</u>					Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicators present as evidenced by saturation throughout soil.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/21/2019

Applicant/Owner: Zayo Group State: California Sampling Point: 65-2 Feature ID: U61-2

Investigator(s): MO, JA Section, Township, Range: 5, T45N, R14E

Local relief (hillside, terrace, etc.): Roadside slope Local Relief (concave, convex, none): Convex Slope (%): 3

Subregion (LRR): D Lat: 41.76908 Long: -120.3753 Datum: NAD83

Soil Map Unit Name: None NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## **SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes      No x

Hydric Soil Present? Yes      No x

Wetland Hydrology Present? Yes      No x

Is the Sampled Area within a Wetland? Yes      No x

## **Evaluation of features designated "Other Waters"**

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

Remarks: Sample point lacks all indicators of wetland parameters. Upland pair point to W61-2.

## **VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER**

3/3 Abbrev. Species Name Absolute Dominant Indicator  
Tree Stratum (Plot size: 30' radius) % Cover Species? Status

1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)

1				
2				
3				
4				
5				
		0	= Total Cover	

Herb Stratum (Plot size: 5' radius)

1	Broine	Bromus inermis	65	YES	FACU
2	Cirarv	Cirsium arvense	10	NO	FACU
3	Alopra	Alopecurus pratensis	10	NO	FACW
4					
5					
6					
7					
8					
9					
10					
11					
		85	= Total Cover		

Woody Vine Stratum (Plot size:     )

1				
2				
		0	= Total Cover	

% Bare Ground in Herb      % Cover of Biotic     

## **Dominance Test worksheet:**

Number of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant  
Species Across All Strata: 1 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A/B)

## **Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species	0	x 1 = 0
FACW species	10	x 2 = 20
FAC species	0	x 3 = 0
FACU species	75	x 4 = 300
UPL species	0	x 5 = 0
Column Totals:	85	(A) 320 (B)
Prevalence Index = B/A =		3.7647

## **Hydrophytic Vegetation Indicators:**

- 1 - Rapid Test for Hydrophytic Vegetation
- No 2 - Dominance Test is >50%
- No 3 - Prevalence Index is  $\leq 3.0$ <sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants<sup>1</sup>
- 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## **Hydrophytic Vegetation Present?**

Yes      No X

Remarks: Sample point dominated by FACU vegetation.

SOIL							Sampling Point:	65-2
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	7.5 YR 3/2	100					Silty loam	Gravel throughout
2-4	7.5 YR 3/2	60					Silty clay loam	Gravel throughout
	7.5 YR 3/4	40						
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>							<b>Hydric Soil Present?</b>	
Type: <u>Roadside</u> Depth (inches): <u>4</u>							Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
<b>Remarks:</b> Soil point lacks hydric soil indicators, roadfill as evidenced by the gravel throughout soil.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )				
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )				
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )				
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)				
<b>Field Observations:</b>							<b>Wetland Hydrology Present?</b>	
Surface Water Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>						
Water Table Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>						
Saturation Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>						
(includes capillary fringe)						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/21/2019

Applicant/Owner: Zayo Group State: California Sampling Point: 66-2 Feature ID: W62-2

Investigator(s): MO, JA Section, Township, Range: 5, T45N, R14E

Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR): D Lat: 41.77083 Long: -120.37505 Datum: NAD83

Soil Map Unit Name: (135) Drews gravelly loam, 0 to 9 percent slope NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No     

Hydric Soil Present? Yes x No     

Wetland Hydrology Present? Yes x No     

Is the Sampled Area within a Wetland? Yes x No     

## Evaluation of features designated "Other Waters"

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

Remarks: Wetland parameters are present as indicated by hydrology indicator (saturation and high water table), hydric soils (F3), and a dominance of hydrophytic vegetation.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev. Species Name Absolute Dominant Indicator  
Tree Stratum (Plot size: 30' radius) % Cover Species? Status

1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)

1				
2				
3				
4				
5				
		0	= Total Cover	

Herb Stratum (Plot size: 5' radius)

1	Carutr	Carex utriculata	90	YES	OBL
2	Alopra	Alopecurus pratensis	10	NO	FACW
3					
4					
5					
6					
7					
8					
9					
10					
11					
		100	= Total Cover		

Woody Vine Stratum (Plot size:     )

1				
2				
		0	= Total Cover	

% Bare Ground in Herb      % Cover of Biotic     

## Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant  
Species Across All Strata: 1 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 1 (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	90	x 1 = 90
FACW species	10	x 2 = 20
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	100 (A)	110 (B)
Prevalence Index = B/A		1.1

## Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
5 - Wetland Non-Vascular Plants<sup>1</sup>  
6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## Hydrophytic Vegetation Present?

Yes X No     

Remarks: Hydrophytic vegetation dominant as indicated by a dominance of OBL species.



SOIL							Sampling Point: 66-2	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10 YR 2/2	100					Clay loam	Distinct redox concentrations
2-12	10 YR 4/2	90	7.5 YR 4/4	10	C	M	Clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>					
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )					
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )					
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Reduced Vertic (F18)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )	<input checked="" type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Red Parent Material (TF2)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )	<input type="checkbox"/> Redox Dark Surface (F6)		<input type="checkbox"/> Other (Explain in Remarks)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)							
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b>							<b>Hydric Soil Present?</b>	
Type: <input type="text"/> Shovel refusal							<input type="checkbox"/> Yes <input checked="" type="checkbox"/> X <input type="checkbox"/> No <input type="checkbox"/>	
Depth (inches): <input type="text"/> 12								
<b>Remarks:</b> Hydric soil indicators are observed and meet indicators of F3 Depleted Matrix, with indicators of a soil that is at least 6 inches thick starting in the top 10 inches of soil surface, with redox concentrations (soft masses or pore linings), in a matrix with a value of 4 or more and chroma of 2 or less.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>			<b>Secondary Indicators (2 or more required)</b>					
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )					
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )					
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )					
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input checked="" type="checkbox"/> Drainage Patterns (B10)					
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)					
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)					
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)					
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)					
<b>Field Observations:</b>							<b>Wetland Hydrology Present?</b>	
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/> X	Depth (inches):	<input type="text"/>		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> X <input type="checkbox"/> No <input type="checkbox"/>		
Water Table Present?	Yes <input checked="" type="checkbox"/> X	No <input type="checkbox"/>	Depth (inches):	<input type="text"/> 8				
Saturation Present?	Yes <input checked="" type="checkbox"/> X	No <input type="checkbox"/>	Depth (inches):	<input type="text"/> 1				
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicators present as evidenced by saturation and high water table throughout soil.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/21/2019

Applicant/Owner: Zayo Group State: California Sampling Point: 67-2 Feature ID: U62-2

Investigator(s): MO, JA Section, Township, Range: 5, T45N, R14E

Local relief (hillside, terrace, etc.): Roadside slope Local Relief (concave, convex, none): Convex Slope (%): 8

Subregion (LRR): D Lat: 41.77082 Long: -120.3751 Datum: NAD83

Soil Map Unit Name: (135) Drews gravelly loam, 0 to 9 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x

Hydric Soil Present? Yes      No x

Wetland Hydrology Present? Yes      No x

Is the Sampled Area within a Wetland? Yes      No x

## Evaluation of features designated "Other Waters"

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

Remarks: Sample point lacks all indicators of wetland parameters. Upland pair point to W62-2.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev. Species Name Absolute Dominant Indicator  
Tree Stratum (Plot size: 30' radius) % Cover Species? Status

1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)

1				
2				
3				
4				
5				
		0	= Total Cover	

Herb Stratum (Plot size: 5' radius)

1	Broine	Bromus inermis	40	YES	FACU
2	Medsat	Medicago sativa	25	YES	UPL
3	Alopra	Alopecurus pratensis	10	NO	FACW
4					
5					
6					
7					
8					
9					
10					
11					
		75	= Total Cover		

Woody Vine Stratum (Plot size:     )

1				
2				
		0	= Total Cover	

% Bare Ground in Herb 25 % Cover of Biotic     

## Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant  
Species Across All Strata: 2 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	0	x 1 = 0
FACW species	10	x 2 = 20
FAC species	0	x 3 = 0
FACU species	40	x 4 = 160
UPL species	25	x 5 = 125
Column Totals:	75	(A)
Prevalence Index = B/A		305 (B)
		4.0667

## Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- No 2 - Dominance Test is >50%
- No 3 - Prevalence Index is  $\leq 3.0$ <sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants<sup>1</sup>
- 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## Hydrophytic Vegetation Present?

Yes      No X

Remarks: Sample point dominated by FACU and UPL vegetation.

<b>SOIL</b>							Sampling Point: 67-2	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10 YR 6/3	50					Sandy loam	
	10 YR 4/1	50						
4-12	10 YR 6/3	65					Loamy sand	Gravel throughout
	10 YR 4/2	35						

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.
<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
--	---	--

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**  
 Type: Roadside, compact roadbase gravel  
 Depth (inches): 12

**Hydric Soil Present?**  
 Yes ☐ No ☒

**Remarks:** Soil point lacks hydric soil indicators, roadfill as evidenced by the gravel in second layer of soil.

**HYDROLOGY**

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
<b>Primary Indicators (minimum of one required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)

**Field Observations:**  
 Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

**Wetland Hydrology Present?**  
 Yes ☐ No ☒

**Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:** No hydrology indicators observed.

# **WETLAND DETERMINATION DATA FORM -Arid West Region**

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/21/2019

Applicant/Owner: Zayo Group State: California Sampling Point: 68-2 Feature ID: W64-2

Investigator(s): MO, JA Section, Township, Range: 5, T45N, R14E

Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR): D Lat: 41.77093 Long: -120.37533 Datum: NAD83

Soil Map Unit Name: (135) Drews gravelly loam, 0 to 9 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## **SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes x No     

Hydric Soil Present? Yes x No     

Wetland Hydrology Present? Yes x No     

Is the Sampled Area  
within a Wetland? Yes x No     

## **Evaluation of features designated "Other Waters"**

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

**Remarks:** Wetland parameters are present as indicated by hydrology indicator (saturation and high water table), hydric soils (F3), and a dominance of hydrophytic vegetation.

## **VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30' radius</u> )				

1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>15' radius</u> )				
1				
2				
3				
4				
5				
		<u>0</u>	= Total Cover	

Herb Stratum (Plot size: <u>5' radius</u> )				
1	<u>Junbal</u>	<u>Juncus balticus</u>	<u>55</u>	<u>YES</u> <u>FACW</u>
2	<u>Typlat</u>	<u>Typha latifolia</u>	<u>10</u>	<u>NO</u> <u>OBL</u>
3	<u>Hypsco</u>	<u>Hypericum scouleri</u>	<u>20</u>	<u>YES</u> <u>FACW</u>
4	<u>Epicil</u>	<u>Epilobium ciliatum</u>	<u>15</u>	<u>NO</u> <u>FACW</u>
5				
6				
7				
8				
9				
10				
11				
		<u>100</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>	= Total Cover	

% Bare Ground in Herb      % Cover of Biotic     

## **Dominance Test worksheet:**

Number of Dominant Species  
That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant  
Species Across All Strata: 2 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 1 (A/B)

## **Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species	10	x 1 = <u>10</u>
FACW species	90	x 2 = <u>180</u>
FAC species	0	x 3 = <u>0</u>
FACU species	0	x 4 = <u>0</u>
UPL species	0	x 5 = <u>0</u>
Column Totals:	<u>100</u> (A)	<u>190</u> (B)
Prevalence Index = B/A =		<u>1.9</u>

## **Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
5 - Wetland Non-Vascular Plants<sup>1</sup>  
6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## **Hydrophytic Vegetation Present?**

Yes X No     

**Remarks:** Hydrophytic vegetation dominant as indicated by a dominance of FACW species.

SOIL							Sampling Point:		68-2	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Matrix		Redox Features				Texture	Remarks		
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>				
0-16	10 YR 4/2	95	5 YR 4/6	5	C	M	Sandy clay	Prominent redox concentrations		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>										
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>						
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )						
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )						
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)						
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )	<input checked="" type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)						
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )	<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)						
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)									
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)									
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)									
<input type="checkbox"/> Sandy Gleyed Matrix (S4)				<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.						
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>				
Type: _____ None _____						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Depth (inches): _____ None _____										
<b>Remarks:</b> Hydric soil indicators are observed and meet indicators of F3 Depleted Matrix, with indicators of a soil that is at least 6 inches thick starting in the top 10 inches of soil surface, with distinct or prominent redox concentrations (soft masses or pore linings), in a matrix with a value of 4 or more and chroma of 2 or less.										
<b>HYDROLOGY</b>										
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>				
Primary Indicators (minimum of one required; check all that apply)										
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )						
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )						
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )						
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)						
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)						
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)						
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)						
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)						
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)						
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>				
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): _____ 0		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>							
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): _____ 0									
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (includes capillary fringe)	Depth (inches): _____ 0									
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>										
<b>Remarks:</b> Hydrology indicators present as evidenced by saturation, surface water, and high water table.										

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/21/2019

Applicant/Owner: Zayo Group State: California Sampling Point: 69-2 Feature ID: U64-2

Investigator(s): MO, JA Section, Township, Range: 5, T46N, R14E

Local relief (hillside, terrace, etc.): Roadside slope Local Relief (concave, convex, none): Convex Slope (%): 3

Subregion (LRR): D Lat: 41.77093 Long: -120.37529 Datum: NAD83

Soil Map Unit Name: (135) Drews gravelly loam, 0 to 9 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x

Hydric Soil Present? Yes      No x

Wetland Hydrology Present? Yes      No x

Is the Sampled Area within a Wetland? Yes      No x

## Evaluation of features designated "Other Waters"

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

Remarks: Sample point lacks all indicators of wetland parameters. Upland pair point to W64-2.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev. Species Name Absolute Dominant Indicator  
Tree Stratum (Plot size: 30' radius) % Cover Species? Status

1                           
2                           
3                           
4                           
0 = Total Cover

Sapling/Shrub Stratum (Plot size: 15' radius)

1                           
2                           
3                           
4                           
5                           
0 = Total Cover

Herb Stratum (Plot size: 5' radius)

1 Broine Bromus inermis 60 YES FACU  
2 Lacser Lactuca serriola 15 NO FACU  
3 Epilil Epilobium ciliatum 10 NO FACW  
4 Lotcor Lotus corniculatus 10 NO FAC  
5                           
6                           
7                           
8                           
9                           
10                           
11                           
95 = Total Cover

Woody Vine Stratum (Plot size:     )

1                           
2                           
0 = Total Cover

% Bare Ground in Herb 5 % Cover of Biotic     

## Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant  
Species Across All Strata: 1 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A/B)

## Prevalence Index worksheet:

Total % Cover of: Multiply by:  
OBL species 0 x 1 = 0  
FACW species 10 x 2 = 20  
FAC species 10 x 3 = 30  
FACU species 75 x 4 = 300  
UPL species 0 x 5 = 0  
Column Totals: 95 (A) 350 (B)  
Prevalence Index = B/A = 3.6842

## Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
5 - Wetland Non-Vascular Plants<sup>1</sup>  
6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## Hydrophytic Vegetation Present?

Yes      No X

Remarks: Sample point dominated by FACU vegetation.

[illegible]

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc Sampling Point: 100-2 Feature ID: W100-2  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/19/2019  
 Investigator(s): PF, MW Section, Township, Range: 32, T45N, R14E  
 Local relief (hillside, terrace, etc.): Hillslope Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 41.69118 Long: -120.37515 Datum: NAD 83  
 Soil Map Unit Name: (176) Pit silty clay loam, 0 to 2 percent slopes NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? No (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: Hydric soil indicators observed, hydrophytic vegetation dominant, and hydrology indicators observed. All three criteria met. Area is a wetland.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	12	_____	_____
5	_____	_____	_____	_____
		12	= Total Cover	
Herb Stratum	(Plot size: 5' radius _____)			
1	Carneb Carex nebrascensis	90	YES	OBL
2	Lacser Lactuca serriola	5	NO	FACU
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		95	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust: 0

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>90</u>	x 1 = <u>90</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>5</u>	x 4 = <u>20</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>95</u> (A)	<u>110</u> (B)
Prevalence Index = B/A = <u>1.1579</u>	

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Hydrophytic vegetation (OBL) dominant.



SOIL							Sampling Point: 100-2	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-7	10YR 2/1	100					Clay	
7-16	10YR 3/2	70	5YR 3/4	30	C	M	Sandy clay	Gravel present
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)					
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)					
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/>					
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Hydric soil indicator Redox Dark Surface observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/>		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>0</u>		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>0</u>						
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>0</u>						
(includes capillary fringe)						<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>		
<b>Remarks:</b> Hydrology indicators observed including surface water, high water table, and saturation.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc Sampling Point: 101-2 Feature ID: U100-2  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/19/2019  
 Investigator(s): PF, MW Section, Township, Range: 32, T45N, R14E  
 Local relief (hillside, terrace, etc.): Hillslope Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 41.69118 Long: -120.3752 Datum: NAD 83  
 Soil Map Unit Name: (176) Pit silty clay loam, 0 to 2 percent slopes NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? No (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

**Remarks:** Hydric soil indicators not observed, hydrophytic vegetation not observed dominant, and hydrology indicators not observed. All three criteria not met. Area is not a wetland.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1	Chrvis	Chrysothomus viscidiflorus	5	YES UPL
2				
3				
4				
5				
		<u>5</u>	= Total Cover	

Herb Stratum (Plot size: <u>5' radius</u> )				
1	Elygla	Elymus glaucus	60	YES FACU
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>60</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>	= Total Cover	

% Bare Ground in Herb Stratum: 40 % Cover of Biotic Crust: 0

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>60</u>	x 4 = <u>240</u>
UPL species <u>5</u>	x 5 = <u>25</u>
Column Totals: <u>65</u> (A)	<u>265</u> (B)
Prevalence Index = B/A = <u>4.0769</u>	

### Hydrophytic Vegetation Indicators:

No 1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes      No X

**Remarks:** Hydrophytic vegetation not observed. Area dominated by upland species.

SOIL							Sampling Point: 101-2	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-14	10YR 3/2	100					Sandy loam	Gravel

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
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<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?**  
 Yes ☐ No ☒

**Remarks:** Hydric soil indicators not observed.

**HYDROLOGY**

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)		
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**  
 Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

**Wetland Hydrology Present?**  
 Yes ☐ No ☒

**Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:** Hydrology indicators not observed.

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc Sampling Point: 102-2 Feature ID: W101-2  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/19/2019  
 Investigator(s): PF, MW Section, Township, Range: 32, T45N, R14E  
 Local relief (hillside, terrace, etc.): Hillslope Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 41.69291 Long: -120.37514 Datum: NAD 83  
 Soil Map Unit Name: (109) Bieber gravelly loam, 0 to 9 percent slopes NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? No (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No       
 Is the Sampled Area within a Wetland? Yes x No     

Remarks: Hydric soil indicators observed, hydrophytic vegetation dominant, and hydrology indicators observed. All three criteria met. Area is a wetland.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>5' radius</u> )				
1 <u>Alopra</u>	<u>Alopecurus pratensis</u>	<u>30</u>	<u>YES</u>	<u>FACW</u>
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>30</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 70 % Cover of Biotic Crust: 0

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>30</u>	x 2 =	<u>60</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>30</u> (A)		<u>60</u> (B)
Prevalence Index = B/A = <u>2</u>		

## Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Hydrophytic vegetation (FACW) dominant.

SOIL							Sampling Point: 102-2	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR 3/2	90	5YR 4/4	10	C	M	Clay loam	
2-16	7.5YR 3/2	85	5YR 4/6	15	C	M	Clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Hydric soil indicator Redox Dark Surface observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input checked="" type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicator observed includes surface soil cracks.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc Sampling Point: 103-2 Feature ID: U101-2  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/19/2019  
 Investigator(s): PF, MW Section, Township, Range: 32, T45N, R14E  
 Local relief (hillside, terrace, etc.): Hillslope Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 41.6929 Long: -120.37519 Datum: NAD 83  
 Soil Map Unit Name: (109) Bieber gravelly loam, 0 to 9 percent slopes NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? No (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W101-2. No hydrology indicators, no hydric soil indicators, and vegetation dominated by upland species.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		0	= Total Cover	
Herb Stratum	(Plot size: 5' radius _____)			
1	Vendub Ventenata dubia	30	YES	UPL
2	Elyely Elymus elymoides	20	YES	FACU
3	Grisqu Grindelia squarrosa	15	YES	FACU
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		65	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 35 % Cover of Biotic Crust: 0

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>35</u>	x 4 =	<u>140</u>
UPL species <u>30</u>	x 5 =	<u>150</u>
Column Totals: <u>65</u> (A)		<u>290</u> (B)
Prevalence Index = B/A = <u>4.4615</u>		

### Hydrophytic Vegetation Indicators:

- No 1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Hydrophytic vegetation not observed. Area dominated by upland vegetation.

SOIL		Sampling Point: 103-2				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <span style="float: right;"><sup>2</sup>Location: PL=Pore Lining, M=Matrix.</span>						
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						
<input type="checkbox"/> Histosol (A1)		<input type="checkbox"/> Sandy Redox (S5)				
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Stripped Matrix (S6)				
<input type="checkbox"/> Black Histic (A3)		<input type="checkbox"/> Loamy Mucky Mineral (F1)				
<input type="checkbox"/> Hydrogen Sulfide (A4)		<input type="checkbox"/> Loamy Gleyed Matrix (F2)				
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )		<input type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )		<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)		<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Thick Dark Surface (A12)		<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)		<input type="checkbox"/> Vernal Pools (F9)				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)						
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.						
<b>Restrictive Layer (if present):</b>		<b>Hydric Soil Present?</b>				
Type: <u>Compacted road base gravel</u>		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Depth (inches): <u>0</u>						
<b>Remarks:</b> No soil pit excavated. Area is gravel roadside fill.						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (2 or more required)</b>				
<b>Primary Indicators (minimum of one required; check all that apply)</b>						
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )				
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )				
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )				
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> FAC-Neutral Test (D5)				
<input type="checkbox"/> Other (Explain in Remarks)						
<b>Field Observations:</b>		<b>Wetland Hydrology Present?</b>				
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>						
(includes capillary fringe)						
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> Hydrology indicators not observed						

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc Sampling Point: 104-2 Feature ID: W102-2  
Applicant/Owner: Zayo Group State: California Sampling Date: 8/19/2019  
Investigator(s): PF, MW Section, Township, Range: 32, T45N, R14E  
Local relief (hillside, terrace, etc.): Hillslope Local Relief (concave, convex, none): Concave Slope (%): 2  
Subregion (LRR): D Lat: 41.69666 Long: -120.37511 Datum: NAD 83  
Soil Map Unit Name: (111) Bieber cobbly loam, 2 to 15 percent slopes, eroded NWI classification: None  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
Are Vegetation No, Soil No, or Hydrology No naturally problematic? No (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
Hydric Soil Present? Yes x No       
Wetland Hydrology Present? Yes x No       
Is the Sampled Area within a Wetland? Yes x No     

Remarks: Hydric soil indicators observed, hydrophytic vegetation dominant, and hydrology indicators observed. All three criteria met. Area is a wetland.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	12	_____	_____
5 _____	_____	_____	_____	_____
		12	= Total Cover	
Herb Stratum	(Plot size: 5' radius _____)			
1 <u>Alopra</u>	<u>Alopecurus pratensis</u>	15	NO	<u>FACW</u>
2 <u>Elepal</u>	<u>Eleocharis palustris</u>	30	YES	<u>OBL</u>
3 <u>Junbal</u>	<u>Juncus balticus</u>	40	YES	<u>FACW</u>
4 _____	_____	_____	_____	_____
5 _____	_____	_____	_____	_____
6 _____	_____	_____	_____	_____
7 _____	_____	_____	_____	_____
8 _____	_____	_____	_____	_____
9 _____	_____	_____	_____	_____
10 _____	_____	_____	_____	_____
11 _____	_____	_____	_____	_____
		85	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 15 % Cover of Biotic Crust: 0

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>30</u>	x 1 = <u>30</u>
FACW species <u>55</u>	x 2 = <u>110</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>85</u> (A)	<u>140</u> (B)
Prevalence Index = B/A = <u>1.6471</u>	

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Hydrophytic vegetation dominant.



SOIL							Sampling Point: 104-2	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-10	10 YR 2/1	97	5YR 3/4	3	C	M	Clay	
10-14	10YR 3/3	95	5YR 3/2	5	C	M	Clay	Gravel present
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: _____ Rock _____ Depth (inches): _____ 14 _____						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Hydric soil indicator Redox Dark Surface observed. Rock at 14".								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> Surface Water (A1)						<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)						<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)						<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )						<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )						<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )						<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input checked="" type="checkbox"/> Surface Soil Cracks (B6)						<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)						<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)						<input type="checkbox"/> Other (Explain in Remarks)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____								
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ 10 _____ (includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicators observed								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc Sampling Point: 105-2 Feature ID: U102-2  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/19/2019  
 Investigator(s): PF, MW Section, Township, Range: 32, T45N, R14E  
 Local relief (hillside, terrace, etc.): Hillslope Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 41.6966 Long: -120.37518 Datum: NAD 83  
 Soil Map Unit Name: (111) Bieber cobbly loam, 2 to 15 percent slopes, eroded NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? No (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x  
 Hydric Soil Present? Yes      No x  
 Wetland Hydrology Present? Yes      No x  
 Is the Sampled Area within a Wetland? Yes      No X

Remarks: Hydric soil indicators not observed, hydrophytic vegetation not observed, and hydrology indicators not observed. All three criteria not met. Area is not a wetland.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		0	= Total Cover	
Herb Stratum	(Plot size: 5' radius _____)			
1	Vendub                      Ventenata dubia	10	YES	UPL
2	Elyely                        Elymus elymoides	10	YES	FACU
3	Acname                      Acmispon americanus	15	YES	UPL
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		35	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 65 % Cover of Biotic Crust: 0

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>10</u>	x 4 = <u>40</u>
UPL species <u>25</u>	x 5 = <u>125</u>
Column Totals: <u>35</u> (A)	<u>165</u> (B)
Prevalence Index = B/A = <u>4.7143</u>	

### Hydrophytic Vegetation Indicators:

No 1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Hydrophytic vegetation not observed. Area dominated by upland species

SOIL		Sampling Point: 105-2				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.				<sup>4</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)					
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)					
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )	<input type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )	<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)						
				<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<b>Restrictive Layer (if present):</b>				<b>Hydric Soil Present?</b>		
Type: <u>Compacted roadbase</u> Depth (inches): <u>0</u>				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> No soil pit excavated. Area is gravel roadside fill.						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)						
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>				<b>Wetland Hydrology Present?</b>		
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <u>          </u>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <u>          </u>			
Saturation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <u>          </u>			
(includes capillary fringe)						
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> Hydrology indicators not observed						

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc Sampling Point: 106-2 Feature ID: W103-2  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/19/2019  
 Investigator(s): PF, MW Section, Township, Range: 32, T45N, R14E  
 Local relief (hillside, terrace, etc.): Hillslope Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 41.69726 Long: -120.37513 Datum: NAD 83  
 Soil Map Unit Name: (111) Bieber cobbly loam, 2 to 15 percent slopes, eroded NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? No (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No       
 Is the Sampled Area within a Wetland? Yes x No     

Remarks: Hydric soil indicators observed, hydrophytic vegetation observed, and hydrology indicators observed. All three criteria met. Area is a wetland.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	12	_____	_____
5	_____	_____	_____	_____
		12	= Total Cover	
Herb Stratum	(Plot size: 5' radius _____)			
1	<u>Alopra</u> <u>Alopecurus pratensis</u>	25	YES	FACW
2	<u>Junens</u> <u>Juncus ensifolius</u>	5	NO	FACW
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		30	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 60 % Cover of Biotic Crust: 0

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>30</u>	x 2 = <u>60</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>30</u> (A)	<u>60</u> (B)
Prevalence Index = B/A = <u>2</u>	

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Hydrophytic vegetation dominant (FACW).

SOIL		Sampling Point: 106-2						
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 2/2	100					Clay	
4-6	10YR 2/2	97	5YR 3/4	3	C	M	Clay	
6-12	10YR 3/2	70	5YR 3/4	30	C	M	Sandy clay	Rock at 12"
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.					<sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)					<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.			
<b>Restrictive Layer (if present):</b>					<b>Hydric Soil Present?</b>			
Type: <u>Rock</u>					Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Depth (inches): <u>12</u>								
<b>Remarks:</b> Hydric soil indicator Redox Dark Surface present.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>			
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input checked="" type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>			
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <u>          </u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <u>          </u>					
Saturation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches): <u>10</u>					
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicator surface soil cracks observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc Sampling Point: 107-2 Feature ID: U103-2  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/19/2019  
 Investigator(s): PF, MW Section, Township, Range: 32, T45N, R14E  
 Local relief (hillside, terrace, etc.): Hillslope Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 41.69726 Long: -120.37521 Datum: NAD 83  
 Soil Map Unit Name: (111) Bieber cobbly loam, 2 to 15 percent slopes, eroded NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? No (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x  
 Hydric Soil Present? Yes      No x  
 Wetland Hydrology Present? Yes      No x  
 Is the Sampled Area within a Wetland? Yes      No X

Remarks: Hydric soil indicators not observed, hydrophytic vegetation dominant, and hydrology indicators not observed. Two of three criteria not met. Area is not a wetland.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>5' radius</u> )				
1 <u>Dispi</u>	<u>Distichlis spicata</u>	<u>70</u>	<u>YES</u>	<u>FAC</u>
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>70</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 30 % Cover of Biotic Crust: 0

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>70</u>	x 3 =	<u>210</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>70</u> (A)		<u>210</u> (B)
Prevalence Index = B/A =		<u>3</u>

## Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Hydrophytic vegetation (FAC) dominant.

SOIL						Sampling Point:		107-2	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix		Redox Features				Texture	Remarks	
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>			
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)									
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			Indicators for Problematic Hydric Soils <sup>3</sup> :			
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )			
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )			
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)			
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)			
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)						
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)						
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.			
<input type="checkbox"/> Sandy Gleyed Matrix (S4)									
Restrictive Layer (if present):					Hydric Soil Present?				
Type: compacted roadbase									
Depth (inches):					Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Remarks: No soil pit excavated. Area is gravel roadside fill.									
HYDROLOGY									
Wetland Hydrology Indicators:					Secondary Indicators (2 or more required)				
Primary Indicators (minimum of one required; check all that apply)									
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)			
Field Observations:					Wetland Hydrology Present?				
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):						
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):						
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
Remarks: Hydrology indicators not observed									

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc Sampling Point: 112-2 Feature ID: W108-2  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/20/2019  
 Investigator(s): MW & PF Section, Township, Range: 20, T45N, R14E  
 Local relief (hillside, terrace, etc.): Hillside Local Relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR): D Lat: 41.72879 Long: -120.37504 Datum: NAD 83  
 Soil Map Unit Name: (177) Pit clay, 2 to 5 percent slopes NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? No (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: Hydrology indicators observed, hydrophytic vegetation observed, and hydric soil indicators observed. All three criteria met. Area is a wetland.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: <u>15' radius</u> )				
1 <u>Sallut</u>	<u>Salix lutea</u>	<u>30</u>	<u>YES</u>	<u>OBL</u>
2				
3				
4				
5				
		<u>30</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>5' radius</u> )				
1 <u>Typlat</u>	<u>Typha latifolia</u>	<u>50</u>	<u>YES</u>	<u>OBL</u>
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>50</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 20 % Cover of Biotic Crust: 0

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>80</u>	x 1 =	<u>80</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>80</u> (A)		<u>80</u> (B)
Prevalence Index = B/A = <u>1</u>		

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Hydrophytic vegetation dominant (OBL).



SOIL		Sampling Point: 112-2				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
1-2	10YR 2/2	100			Silt loam	
2-12	10YR 2/1	70	2.5YR 4/8	30	Clay	
12-16	10YR3/2	90	5YR 4/6	10	Clay	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.			<sup>4</sup> Location: PL=Pore Lining, M=Matrix.			
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input checked="" type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)				
		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)				
		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
<b>Restrictive Layer (if present):</b>		<b>Hydric Soil Present?</b>				
Type: _____ Depth (inches): _____		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
<b>Remarks:</b> Hydric soil indicator Redox Dark Surface observed.						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (2 or more required)</b>				
Primary Indicators (minimum of one required; check all that apply)						
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )				
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )				
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )				
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)				
<input checked="" type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)				
<b>Field Observations:</b>		<b>Wetland Hydrology Present?</b>				
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____					
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)					
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> Hydrology indicators drift deposits and FAC-neutral test observed.						

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc Sampling Point: 113-2 Feature ID: U108-2  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/20/2019  
 Investigator(s): MW Section, Township, Range: 20, T45N, R14E  
 Local relief (hillside, terrace, etc.): Hillside Local Relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR): D Lat: 41.72879 Long: -120.37509 Datum: NAD  
 Soil Map Unit Name: (177) Pit clay, 2 to 5 percent slopes NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? No (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

**Remarks:** Hydrology indicators not observed, hydrophytic vegetation not observed, and hydric soil indicators not observed. All three criteria not met. Area is not a wetland.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>15' radius</u> )				
1	Erinau	Ericameria nauseosa	5	YES UPL
2				
3				
4				
5				
		5	= Total Cover	

Herb Stratum (Plot size: <u>5' radius</u> )				
1	Disspi	Distichlis spicata	60	YES FAC
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		60	= Total Cover	

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		0	= Total Cover	

%Bare Ground in Herb Stratum: 35 % Cover of Biotic Crust: 0

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>60</u>	x 3 = <u>180</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>5</u>	x 5 = <u>25</u>
Column Totals: <u>65</u> (A)	<u>205</u> (B)
Prevalence Index = B/A = <u>3.1538</u>	

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes      No X

**Remarks:** Area dominated by upland plant species.

SOIL							Sampling Point: 113-2	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR 3/2	100					Silt loam	Refusal at 2", gravel
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)						<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: _____ Compacted roadbase								
Depth (inches): _____ 2						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Hydric soil indicators not observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicators not observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc Sampling Point: 114-2 Feature ID: W110-2  
Applicant/Owner: Zayo Group State: California Sampling Date: 8/21/2019  
Investigator(s): PF, MW Section, Township, Range: 20, T45N, R14E  
Local relief (hillside, terrace, etc.): Flat Local Relief (concave, convex, none): Concave Slope (%): 0  
Subregion (LRR): D Lat: 41.73192 Long: -120.37506 Datum: NAD 83  
Soil Map Unit Name: (188) Salisbury gravelly loam, 0 to 9 percent slopes NWI classification: PEM  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
Are Vegetation No, Soil No, or Hydrology No naturally problematic? No (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
Hydric Soil Present? Yes x No       
Wetland Hydrology Present? Yes x No       
Is the Sampled Area within a Wetland? Yes x No     

Remarks: Hydrophytic vegetation observed, hydric soil indicators observed, and hydrology indicators observed. All three criteria met. Area is a wetland.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		0	= Total Cover	
Herb Stratum	(Plot size: 5' radius _____)			
1	Junbal Juncus balticus	97	YES	FACW
2	Alopra Alopecurus pratensis	2	NO	FACW
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		99	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust: 0

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>99</u>	x 2 = <u>198</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>99</u> (A)	<u>198</u> (B)
Prevalence Index = B/A = <u>2</u>	

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Hydrophytic vegetation dominant (FACW).

SOIL							Sampling Point: 114-2	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 3/2	97	5YR 3/4	3	C	PL	Loam	Dense fibrous roots
8-16	10YR 2/1	70	5YR 3/4	30	C	M	Sandy clay	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Hydric soil indicator Redox Dark Surface observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input checked="" type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>2</u>						
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>0</u>						
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>0</u>						
(includes capillary fringe)						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicators observed include surface water, high water table, saturation, oxidized rhizospheres, and FAC-neutral test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc Sampling Point: 115-2 Feature ID: U110-2  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/20/2019  
 Investigator(s): PF, MW Section, Township, Range: 20, T45N, R14E  
 Local relief (hillside, terrace, etc.): Flat Local Relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR): D Lat: 41.73192 Long: -120.3751 Datum: NAD 83  
 Soil Map Unit Name: (188) Salisbury gravelly loam, 0 to 9 percent slopes NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? No (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u>
Hydric Soil Present?	Yes <u>    </u> No <u>X</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>X</u>	

**Remarks:** Hydrology indicators not observed, hydrophytic vegetation not observed, and hydric soil indicators not observed. All three criteria not met. Area is not a wetland.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		

<b>Sapling/Shrub Stratum</b> (Plot size: <u>15' radius</u> )				
1				
2				
3				
4				
5				
		<u>0</u>		

<b>Herb Stratum</b> (Plot size: <u>5' radius</u> )				
1	<u>Melalb</u>	<u>Melilotus alba</u>	<u>5</u>	<u>YES</u>
2	<u>Vendub</u>	<u>Ventenata dubia</u>	<u>5</u>	<u>YES</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
			<u>10</u>	

<b>Woody Vine Stratum</b> (Plot size: <u>    </u> )				
1				
2				
			<u>0</u>	

%Bare Ground in Herb Stratum: 90 % Cover of Biotic Crust: 0

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	<u>0</u> x 1 =	<u>0</u>
FACW species	<u>0</u> x 2 =	<u>0</u>
FAC species	<u>0</u> x 3 =	<u>0</u>
FACU species	<u>0</u> x 4 =	<u>0</u>
UPL species	<u>10</u> x 5 =	<u>50</u>
Column Totals:	<u>10</u> (A)	<u>50</u> (B)
Prevalence Index = B/A =		<u>5</u>

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes      No X

**Remarks:** Hydrophytic vegetation not observed. Area dominated by upland species.

SOIL		Sampling Point: 115-2					
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.					<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)							
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)	Indicators for Problematic Hydric Soils <sup>3</sup> :			
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)			
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)			
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Reduced Vertic (F18)			
<input type="checkbox"/> Stratified Layers (A5) (LRR C)			<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Red Parent Material (TF2)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)			<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.			
<input type="checkbox"/> Sandy Gleyed Matrix (S4)							
Restrictive Layer (if present):					Hydric Soil Present?		
Type: <u>Compacted roadbase</u>					Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Depth (inches): <u>0</u>							
Remarks: Hydric soil indicators not observed. Roadside gravel fill. No soil pit, shovel refusal.							
HYDROLOGY							
Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)			
Primary Indicators (minimum of one required; check all that apply)							
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)			
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)			
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)			
<input type="checkbox"/> Water Marks (B1) (Nonriverine)			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)			<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)			
Field Observations:					Wetland Hydrology Present?		
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <u></u>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <u></u>				
Saturation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <u></u>				
(includes capillary fringe)							
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
Remarks: Hydrology indicators not observed.							

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc Sampling Point: 119-2 Feature ID: W112-2  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/21/2019  
 Investigator(s): PF, MW Section, Township, Range: 17, T45N, R14E  
 Local relief (hillside, terrace, etc.): Hillside Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 41.73662 Long: -120.37537 Datum: NAD 83  
 Soil Map Unit Name: (152) Lakeview loam, 0 to 2 percent slopes, Pit River area, MLRA 21 NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? No (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

**Remarks:** Hydrophytic vegetation observed, hydric soil indicators observed, hydrology indicators observed. All three criteria met. Area is a wetland.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		

<b>Sapling/Shrub Stratum</b> (Plot size: <u>15' radius</u> )				
1 <u>Sallut</u>	<u>Salix lutea</u>	<u>5</u>	<u>YES</u>	<u>OBL</u>
2				
3				
4				
5				
		<u>5</u>		

<b>Herb Stratum</b> (Plot size: <u>5' radius</u> )				
1 <u>Carsub2</u>	<u>Carex subfusca</u>	<u>40</u>	<u>YES</u>	<u>FAC</u>
2 <u>Phaarur</u>	<u>Phalaris arundinacea</u>	<u>50</u>	<u>YES</u>	<u>FACW</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>90</u>		

<b>Woody Vine Stratum</b> (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		

%Bare Ground in Herb Stratum: 10 % Cover of Biotic Crust: 0

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>5</u>	x 1 =	<u>5</u>
FACW species <u>50</u>	x 2 =	<u>100</u>
FAC species <u>40</u>	x 3 =	<u>120</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>95</u> (A)		<u>225</u> (B)
Prevalence Index = B/A = <u>2.3684</u>		

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes X No     

**Remarks:** Hydrophytic vegetation dominant (FACW & FAC).



SOIL							Sampling Point: 119-2	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR 2/2	95	5YR 3/4	5	C	M	Silt lam	
5-16	10YR 2/1	75	2.5YR 4/8	25	C	M	Clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: _____ Depth (inches): _____						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Hydric soil indicator Redox Dark Surface observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Depth (inches): _____					
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Depth (inches): _____					
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Depth (inches): _____			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicators observed including water-stained leaves and FAC-neutral test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc Sampling Point: 120-2 Feature ID: U112-2  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/20/2019  
 Investigator(s): PF, MW Section, Township, Range: 17, T45N, R14E  
 Local relief (hillside, terrace, etc.): Hillside Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 41.73662 Long: -120.37543 Datum: NAD 83  
 Soil Map Unit Name: (152) Lakeview loam, 0 to 2 percent slopes, Pit River area, MLRA 21 NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? No (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

**Remarks:** Hydrology indicators not observed, hydrophytic vegetation not observed, and hydric soil indicators not observed. All three criteria not met. Area is not a wetland.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

<b>Sapling/Shrub Stratum</b> (Plot size: <u>15' radius</u> )				
1				
2				
3				
4				
5				
		<u>0</u>	= Total Cover	

<b>Herb Stratum</b> (Plot size: <u>5' radius</u> )				
1 <u>Conary</u>	<u>Convolvulus arvensis</u>	<u>40</u>	<u>YES</u>	<u>UPL</u>
2 <u>Madsat</u>	<u>Maria sativa</u>	<u>30</u>	<u>YES</u>	<u>UPL</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>70</u>	= Total Cover	

<b>Woody Vine Stratum</b> (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 30 % Cover of Biotic Crust: 0

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>70</u>	x 5 = <u>350</u>
Column Totals: <u>70</u> (A)	<u>350</u> (B)
Prevalence Index = B/A = <u>5</u>	

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes      No X

**Remarks:** Hydrophytic vegetation not observed. Area dominated by upland plant species

SOIL		Sampling Point: 120-2						
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.					<sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)								
<input type="checkbox"/> Histosol (A1)		<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Stripped Matrix (S6)						
<input type="checkbox"/> Black Histic (A3)		<input type="checkbox"/> Loamy Mucky Mineral (F1)						
<input type="checkbox"/> Hydrogen Sulfide (A4)		<input type="checkbox"/> Loamy Gleyed Matrix (F2)						
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )		<input type="checkbox"/> Depleted Matrix (F3)						
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )		<input type="checkbox"/> Redox Dark Surface (F6)						
<input type="checkbox"/> Depleted Below Dark Surface (A11)		<input type="checkbox"/> Depleted Dark Surface (F7)						
<input type="checkbox"/> Thick Dark Surface (A12)		<input type="checkbox"/> Redox Depressions (F8)						
<input type="checkbox"/> Sandy Mucky Mineral (S1)		<input type="checkbox"/> Vernal Pools (F9)						
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.						
Restrictive Layer (if present): Type: <u>Compacted roadbase</u> Depth (inches): <u>0</u>					Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Remarks: Hydric soil indicators not observed. Roadside gravel fill. No soil pit, shovel refusal.								
HYDROLOGY								
Wetland Hydrology Indicators:					Secondary Indicators (2 or more required)			
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )				
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )				
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )				
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)				
Field Observations:					Wetland Hydrology Present?			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u></u>		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u></u>						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u></u>						
(includes capillary fringe)								
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks: Hydrology indicators not observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc Sampling Point: 124-2 Feature ID: W115-2  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/22/2019  
 Investigator(s): PF, MW Section, Township, Range: 17, T45N, R14E  
 Local relief (hillside, terrace, etc.): Hillside Local Relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR): D Lat: 41.7433 Long: -120.37562 Datum: NAD 83  
 Soil Map Unit Name: (138) Drews clay loam, wet, 0 to 2 percent slopes NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? No (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No       
 Is the Sampled Area within a Wetland? Yes x No     

Remarks: Hydrophytic vegetation observed, hydric soil indicators observed, hydrology indicators observed. All three criteria met. Area is a wetland.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: <u>15' radius</u> )				
1				
2				
3				
4				
5				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>5' radius</u> )				
1 <u>Carsub2</u>	<u>Carex subfusca</u>	<u>40</u>	<u>YES</u>	<u>FAC</u>
2 <u>Alopra</u>	<u>Alopecurus pratensis</u>	<u>60</u>	<u>YES</u>	<u>FACW</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>100</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 10 % Cover of Biotic Crust: 0

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>60</u>	x 2 =	<u>120</u>
FAC species <u>40</u>	x 3 =	<u>120</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>100</u> (A)		<u>240</u> (B)
Prevalence Index = B/A =		<u>2.4</u>

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Hydrophytic vegetation observed. Dominant species FACW and FAC.

SOIL							Sampling Point: 124-2	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR 2/1	100					Loam	
5-10	10YR 2/1	97	5YR 4/6	3	C	M	Clay loam	
10-16	10YR 2/1	95	5YR 4/6	5	C	M	Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.
 <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input checked="" type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
--	--	--

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?**  
 Yes ☒ No ☐

**Remarks:** Hydric soil indicator Redox Dark Surface observed.

**HYDROLOGY**

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
<b>Primary Indicators (minimum of one required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)

<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
---

**Field Observations:**  
 Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

**Wetland Hydrology Present?**  
 Yes ☒ No ☐

**Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:** Hydrology indicators observed including water-stained leaves and FAC-neutral test.

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc Sampling Point: 125-2 Feature ID: U115-2  
Applicant/Owner: Zayo Group State: California Sampling Date: 8/20/2019  
Investigator(s): PF, MW Section, Township, Range: 17, T45N, R14E  
Local relief (hillside, terrace, etc.): Hillside Local Relief (concave, convex, none): Concave Slope (%): 5  
Subregion (LRR): D Lat: 41.74329 Long: -120.37568 Datum: NAD 83  
Soil Map Unit Name: (138) Drews clay loam, wet, 0 to 2 percent slopes NWI classification: PEM  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
Are Vegetation No, Soil No, or Hydrology No naturally problematic? No (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x  
Hydric Soil Present? Yes      No x  
Wetland Hydrology Present? Yes      No x  
Is the Sampled Area within a Wetland? Yes      No X

Remarks: Hydrology indicators not observed, hydrophytic vegetation not observed, and hydric soil indicators not observed. All three criteria not met. Area is not a wetland.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: <u>15' radius</u> )				
1				
2				
3				
4				
5				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>5' radius</u> )				
1 <u>Thiint</u>	<u>Thinopyrum intermedium</u>	<u>70</u>	<u>YES</u>	<u>UPL</u>
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>70</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 30 % Cover of Biotic Crust: 0

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>70</u>	x 5 = <u>350</u>
Column Totals: <u>70</u> (A)	<u>350</u> (B)
Prevalence Index = B/A = <u>5</u>	

## Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Hydrophytic vegetation not observed. Dominant vegetation upland.

SOIL		Sampling Point: 125-2						
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features			Texture	Remarks	
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			Loc <sup>2</sup>
0-5	10YR 3/3	100					Loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.					<sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)					
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)					
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
Restrictive Layer (if present): Type: _____ Depth (inches): _____ 5					Hydric Soil Present?  Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Remarks: Hydric soil indicators not observed. Roadside gravel fill, shovel refusal at 5".								
HYDROLOGY								
Wetland Hydrology Indicators:					Secondary Indicators (2 or more required)			
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)			
Field Observations:					Wetland Hydrology Present?			
Surface Water Present?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Water Table Present?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____				
Saturation Present?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____ (includes capillary fringe)				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks: Hydrology indicators not observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc Sampling Point: 128-2 Feature ID: W117-2  
Applicant/Owner: Zayo Group State: California Sampling Date: 8/22/2019  
Investigator(s): PF, MW Section, Township, Range: 8, T45N, R14E  
Local relief (hillside, terrace, etc.): Hillside Local Relief (concave, convex, none): Concave Slope (%): 5  
Subregion (LRR): D Lat: 41.74895 Long: -120.37544 Datum: NAD 83  
Soil Map Unit Name: (109) Bieber gravelly loam, 0 to 9 percent slopes NWI classification: PEM  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
Are Vegetation No, Soil No, or Hydrology No naturally problematic? No (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
Hydric Soil Present? Yes x No       
Wetland Hydrology Present? Yes x No       
Is the Sampled Area within a Wetland? Yes x No     

Remarks: Hydrophytic vegetation observed, hydric soil indicators observed, hydrology indicators observed. All three criteria met. Area is a wetland.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____ 15' radius)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		0	= Total Cover	
Herb Stratum	(Plot size: _____ 5' radius)			
1	Alitri Alisma triviale	30	YES	OBL
2	Elepal Eleocharis palustris	50	YES	OBL
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		80	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 20 % Cover of Biotic Crust: 0

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>80</u>	x 1 = <u>80</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>80</u> (A)	<u>80</u> (B)
Prevalence Index = B/A = <u>1</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Hydrophytic vegetation observed dominated by obligate species



SOIL							Sampling Point: 128-2	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR 2/2	100					Silt	
2-12	10YR 2/2	70	5YR 3/4	30	C	M	Sandy clay	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: <u>Shovel refusal</u>								
Depth (inches): <u>12</u>						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Hydric soil indicators observed; Redox Dark Surface. Shovel refusal at 12".								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>						
(includes capillary fringe)						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicators observed including water-stained leaves and FAC-neutral test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc Sampling Point: 129-2 Feature ID: U117-2  
Applicant/Owner: Zayo Group State: California Sampling Date: 8/20/2019  
Investigator(s): PF, MW Section, Township, Range: 8, T45N, R14E  
Local relief (hillside, terrace, etc.): Hillside Local Relief (concave, convex, none): Concave Slope (%): 5  
Subregion (LRR): D Lat: 41.74897 Long: -120.37544 Datum: NAD 83  
Soil Map Unit Name: (109) Bieber gravelly loam, 0 to 9 percent slopes NWI classification: PEM  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
Are Vegetation No, Soil No, or Hydrology No naturally problematic? No (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x  
Hydric Soil Present? Yes      No x  
Wetland Hydrology Present? Yes      No x  
Is the Sampled Area within a Wetland? Yes      No X

Remarks: Hydrology indicators not observed, hydrophytic vegetation not observed, and hydric soil indicators not observed. All three criteria not met. Area is not a wetland.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: <u>15' radius</u> )				
1				
2				
3				
4				
5				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>5' radius</u> )				
1 <u>Medsat</u>	<u>Medicago sativa</u>	<u>5</u>	<u>YES</u>	<u>UPL</u>
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>5</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 95 % Cover of Biotic Crust: 0

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>5</u>	x 5 =	<u>25</u>
Column Totals: <u>5</u> (A)		<u>25</u> (B)
Prevalence Index = B/A = <u>5</u>		

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Hydrophytic vegetation not observed.

SOIL		Sampling Point: 129-2				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
						Roadside gravel
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.					<sup>4</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <b>(LRR C)</b> <input type="checkbox"/> 1 cm Muck (A9) <b>(LRR D)</b> <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) <b>(LRR C)</b> <input type="checkbox"/> 2 cm Muck (A10) <b>(LRR B)</b> <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
					<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	
<b>Restrictive Layer (if present):</b>				<b>Hydric Soil Present?</b>		
Type: <u>Compacted roadbase</u> Depth (inches): <u>0</u>				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Hydric soil indicators not observed. Roadside gravel fill, no soil pit.						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)						
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) <b>(Riverine)</b>		
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) <b>(Riverine)</b>		
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) <b>(Riverine)</b>		
<input type="checkbox"/> Water Marks (B1) <b>(Nonriverine)</b>		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) <b>(Nonriverine)</b>		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) <b>(Nonriverine)</b>		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>				<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>				
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (includes capillary fringe)		Depth (inches): <u>          </u>				
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> Hydrology indicators not observed.						

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Feature ID: W118-2a  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/26/2019  
 Investigator(s): Mike Williams/Justin Ahn Section, Township, Range: 11, T43N, R13E  
 Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Slope (%): 0  
 Subregion (LRR): D Lat: 41.57509 Long: -120.43557 Datum: NAD 83  
 Soil Map Unit Name: (133) Donica gravelly clay loam, 2 to 9 percent slopes NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation N, Soil N, or Hydrology N naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No       
 Is the Sampled Area within a Wetland? Yes x No     

Remarks: All three wetland parameters met. Feature completely dominated by *Phalaris arundinacea*.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		0	= Total Cover	
Herb Stratum	(Plot size: 30' radius _____)			
1	Phaaru Phalaris arundinacea	95	YES	FACW
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		95	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 5 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>95</u>	x 2 = <u>190</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>95</u> (A)	<u>190</u> (B)
Prevalence Index = B/A = <u>2</u>	

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Area dominated by hydrophytic vegetation.

SOIL							Sampling Point: 133-2	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-13	10YR 4/1	70	10YR 3/4	25	C	M	Sandy Clay loam	
			7.5YR 6/8	5	C	PL		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)					
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)					
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input checked="" type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b> Type: <u>Gravel/Rock</u> Depth (inches): <u>13</u>						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Soils meet indicator Depleted Matrix (F3).								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input checked="" type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>						
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicators observed including water-stained leaves and drainage patterns.								

**Remarks:** Area was dominated by upland vegetation. Bare ground was gravel roadfill.

SOIL							Sampling Point: 134-2	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)						<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: <u>Compacted roadbase gravel</u>								
Depth (inches): <u>0</u>						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Soil pit was not dug, road shoulder consisting of compacted roadbase.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>						
(includes capillary fringe)						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Wetland indicators were not observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Point: 011-2 Feature ID: NW001-2  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/20/2019

Investigator(s): ZB, TK Section, Township, Range: 30, T44N, R14E  
 Local relief (hillside, terrace, etc.): Floodplain Local Relief (concave, convex, none): None Slope (%): 0

Subregion (LRR): D Lat: 41.626755 Long: -120.40796 Datum: NAD 83  
 Soil Map Unit Name: (109) Bieber gravelly loam, 0 to 9 percent slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☐ No ☒  
 Hydric Soil Present? Yes ☐ No ☒  
 Wetland Hydrology Present? Yes ☒ No ☐

Is the Sampled Area within a Wetland? Yes ☐ No ☒

Remarks: Suspect area was dominated by Alopecurus and Bromus. Area had wetland hydrology indicators; however, both vegetation and soil indicators were not observed. Fresh emergent wetland previously mapped north of non-wetland.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: _____)				
1				
2				
3				
4				
5				
		0	= Total Cover	

Herb Stratum (Plot size: 1 m x 1 m)				
1 Alopra Alopecurus pratensis	40	YES	FACW	
2 Brotec Bromus tectorum	30	YES	UPL	
3 Elycap Elymus caput-medusae	25	YES	UPL	
4 alysim Alyssum simplex	1	NO	UPL	
5				
6				
7				
8				
9				
10				
11				
		96	= Total Cover	

Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

%Bare Ground in Herb Stratum: 30 % Cover of Biotic Crust: \_\_\_\_\_

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species 0	x 1 =	0
FACW species 40	x 2 =	80
FAC species 0	x 3 =	0
FACU species 0	x 4 =	0
UPL species 56	x 5 =	280
Column Totals: 96 (A)		360 (B)
Prevalence Index = B/A =		3.75

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- No 2 - Dominance Test is >50%
- No 3 - Prevalence Index is ≤3.0<sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants<sup>1</sup>
- 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes ☐ No ☒

Remarks: Bare ground scattered with plant litter. Area did not pass the dominance test or prevalence index. Area dominated by upland vegetation.



SOIL							Sampling Point: 011-2	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-7.5	10 yr 3/2	100					Loam	
7.5-11	10 yr 2/2	100					Sandy loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: _____ Rock _____						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Depth (inches): _____ 11"								
<b>Remarks:</b> Hydric soil indicators were not observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input checked="" type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>1 plus</u>						
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>0</u>						
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>0</u>				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Wetland hydrology indicators were present; high water table, and saturation within 12 inches of the soils surface and surface water present.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Feature ID: NW002-2  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/21/2019  
 Investigator(s): Tk, Zb Section, Township, Range: 18, T44N, R14E  
 Local relief (hillside, terrace, etc.): Valley floor Local Relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): D Lat: 41.65293 Long: -120.39458 Datum: NAD 83  
 Soil Map Unit Name: (176) Pit silty clay loam, 0 to 2 percent slopes NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Suspect area dominated by facultative vegetation; however, area lacked soil and hydrology indicators.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
5 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u>	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>1 m x 1 m</u> )				
1 <u>DIPFUL</u>	<u>Dipsacus fullonum</u>	<u>70</u>	<u>YES</u>	<u>FAC</u>
2 <u>Acname</u>	<u>Acmispon americanus</u>	<u>30</u>	<u>NO</u>	<u>UPL</u>
3 <u>Vertha</u>	<u>Verbascum thapsus</u>	<u>5</u>	<u>NO</u>	<u>FACU</u>
4 <u>Symchi</u>	<u>Symphotrichum chilense</u>	<u>15</u>	<u>NO</u>	<u>FAC</u>
5 <u>Poapra</u>	<u>Poa pratensis</u>	<u>15</u>	<u>NO</u>	<u>FAC</u>
6 <u>Melalb</u>	<u>Melilotus alba</u>	<u>2</u>	<u>NO</u>	<u>UPL</u>
7 <u>Tradub</u>	<u>Traigopogon dubious</u>	<u>3</u>	<u>NO</u>	<u>UPL</u>
8 <u>CIRARV</u>	<u>Cirsium arvense</u>	<u>10</u>	<u>NO</u>	<u>FACU</u>
9 <u>Artdou</u>	<u>Artemisia douglasiana</u>	<u>1</u>	<u>NO</u>	<u>FAC</u>
10 <u>Epibra</u>	<u>Epilobium brachycarpum</u>	<u>1</u>	<u>NO</u>	<u>UPL</u>
11 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>152</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>    </u> )				
1 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>101</u>	x 3 =	<u>303</u>
FACU species <u>15</u>	x 4 =	<u>60</u>
UPL species <u>36</u>	x 5 =	<u>180</u>
Column Totals: <u>152</u> (A)		<u>543</u> (B)
Prevalence Index = B/A = <u>3.5724</u>		

## Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Area dominated by facultative vegetation.

SOIL							Sampling Point: 018-2	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-10	10 yr 2/1	100					Clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)					
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)					
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b> Type: _____ Rock Depth (inches): _____ 10						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> No hydric soil indicator was observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Wetland hydrology indicators were not observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/20/2019

Applicant/Owner: Zayo Group State: California Sampling Point: 53-2 Feature ID: NW50-2

Investigator(s): MO, JA Section, Township, Range: 8, T44N, R14E

Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 4

Subregion (LRR): D Lat: 41.66967 Long: -120.38542 Datum: NAD83

Soil Map Unit Name: (188) Salisbury gravelly loam, 0 to 9 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x

Hydric Soil Present? Yes      No x

Wetland Hydrology Present? Yes x No     

Is the Sampled Area within a Wetland? Yes      No x

## Evaluation of features designated "Other Waters"

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

Remarks: Suspect wetland. Culvert present under 395 leading to suspect area. Hydrology indicators present; however, the other two parameters were not observed. No hydric soil indicators and no vegetation present, as the sample point lacked vegetation.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev. Species Name Absolute Dominant Indicator  
Tree Stratum (Plot size: 30' radius) % Cover Species? Status

1                           
2                           
3                           
4                           
0 = Total Cover

Sapling/Shrub Stratum (Plot size: 15' radius)

1                           
2                           
3                           
4                           
5                           
0 = Total Cover

Herb Stratum (Plot size: 5' radius)

1                           
2                           
3                           
4                           
5                           
6                           
7                           
8                           
9                           
10                           
11                           
0 = Total Cover

Woody Vine Stratum (Plot size:     )

1                           
2                           
0 = Total Cover

% Bare Ground in Herb 100 % Cover of Biotic     

## Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant  
Species Across All Strata: 0 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: #DIV/0! (A/B)

## Prevalence Index worksheet:

Total % Cover of: Multiply by:  
OBL species 0 x 1 = 0  
FACW species 0 x 2 = 0  
FAC species 0 x 3 = 0  
FACU species 0 x 4 = 0  
UPL species 0 x 5 = 0  
Column Totals: 0 (A) 0 (B)  
Prevalence Index = B/A =     

## Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- No 3 - Prevalence Index is  $\leq 3.0$ <sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants<sup>1</sup>
- 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## Hydrophytic Vegetation Present?

Yes      No X

Remarks: Sample point lacks vegetation in roadside depression, areas surrounding depression are dominated by upland species.

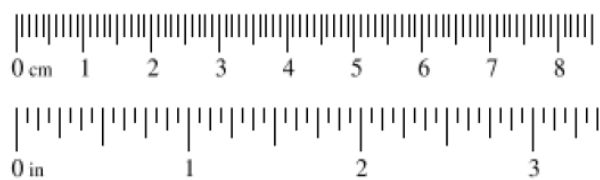


# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> Sp01-3		<b>Feature ID:</b> D01-3		<b>Date:</b> 8/26/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> PF, TK					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Located in Alturas <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.48143, -120.54232			
<b>Potential anthropogenic influences on the channel system:</b> Bridge over feature. Agriculture and roadway adjacent.					
<b>Brief site description:</b> South Fork Pit River. Relatively confined, no floodplain observed.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input checked="" type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> G  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHW M and record the indicators. Record the OHW M position via: <div style="display: flex; justify-content: space-around;"> <input type="checkbox"/> Mapping on aerial photograph           <input checked="" type="checkbox"/> GPS           <input type="checkbox"/> Digitized on computer           <input type="checkbox"/> Other:         </div>					

### Wentworth Size Classes

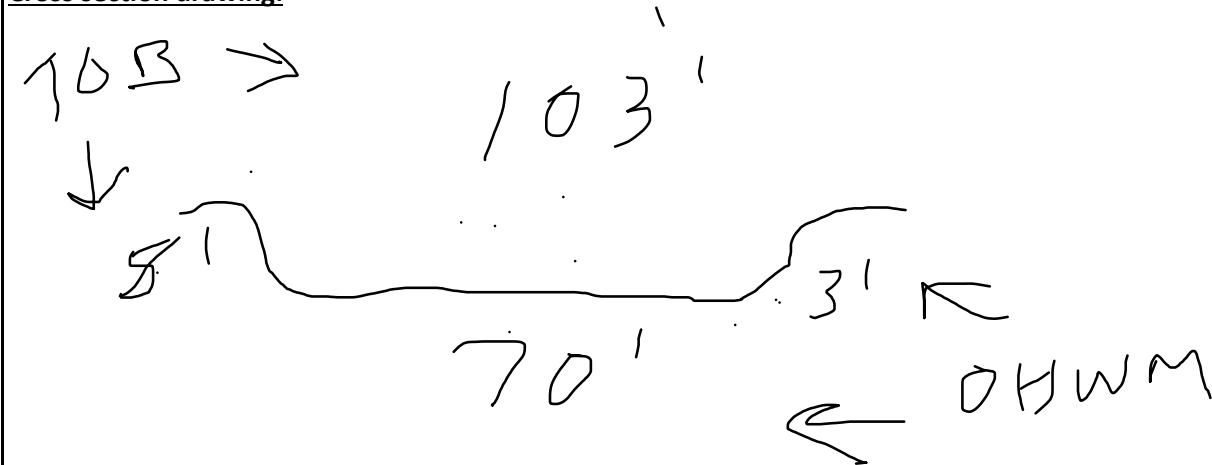
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D01-3

Cross section ID:

Date: 8/26/2019 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Boulder, cobble

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

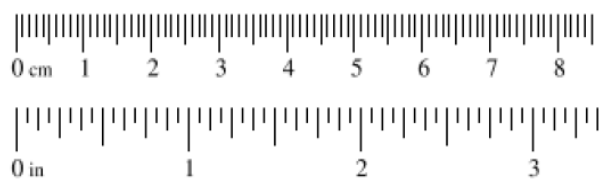
<b>Floodplain unit:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> Sp01-3		<b>Feature ID:</b> D02a-3		<b>Date:</b> 8/26/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> PF, TK					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> U.S. 395 south of Alturas		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.46117, -120.54994		
<b>Potential anthropogenic influences on the channel system:</b> South Fork Pit River, down stream of portion of wildlife refuge, adjacent to U.S. 395.					
<b>Brief site description:</b> South Fork Pit River just south of Alturas.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and			
<input checked="" type="checkbox"/> Existing delineation(s) for site		the most recent event exceeding a 5-year event			
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

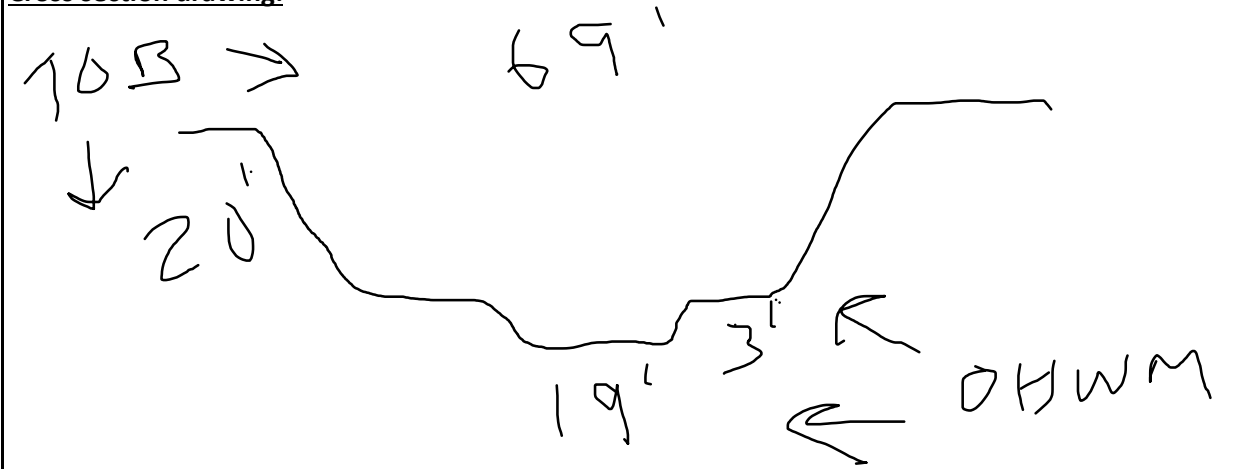
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D02-3

Cross section ID:

Date: 8/26/2019 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

**Comments:**

OHWM = 103 ft. Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Boulder, cobbleTotal veg cover: 90 % Tree: 20 % Shrub: 0 % Herb: 80 %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

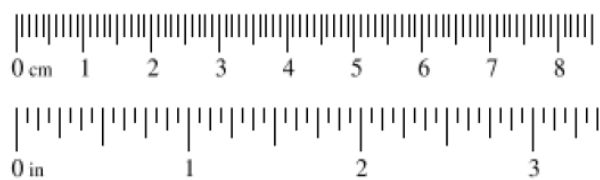
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> SP09-3		<b>Feature ID:</b> D03-3		<b>Date:</b> 8/27/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> PF, TK					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 south of Alturas		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.44070, -120.54841		
<b>Potential anthropogenic influences on the channel system:</b> Man-made ditch that runs parallel to U.S. 395.					
<b>Brief site description:</b> Runs parallel to U.S. 395, outside of fence line. Vegetated present in portions of ditch.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input checked="" type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW and record the indicators. Record the OHW position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

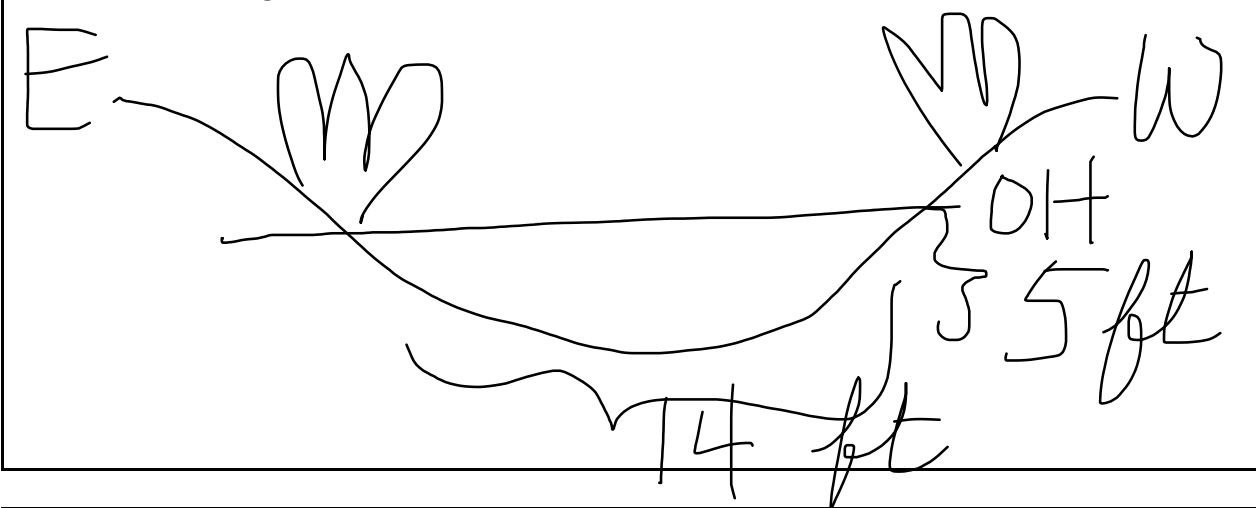
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D03-3

Cross section ID:

Date: 8/27/2019 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**☐

Change in average sediment texture

☒

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

Irrigation canal, no water at time of survey. Constructed bed and bank feature. OHWM evidenced by break in bank slope and changes in vegetation species and cover.

**Floodplain unit:**☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Early (herbaceous &amp; seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☐

Presence of bed and bank

☐

Benches

☐

Soil development

☐

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

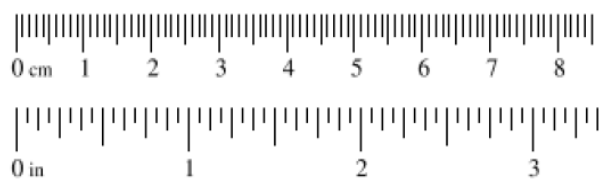
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> SP10-3		<b>Feature ID:</b> D04a-3		<b>Date:</b> 8/27/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> PF, TK					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 south of Alturas		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.41612, -120.54487		
<b>Potential anthropogenic influences on the channel system:</b> U.S. 395, Fencing running perpendicular, and bridge crossing.					
<b>Brief site description:</b> South Fork Pit River perpendicular to U.S 395. Banks lined with Phalaris. Unknown depth. Ordinary high water mark mapped on both sides of the road.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input checked="" type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW and record the indicators. Record the OHW position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

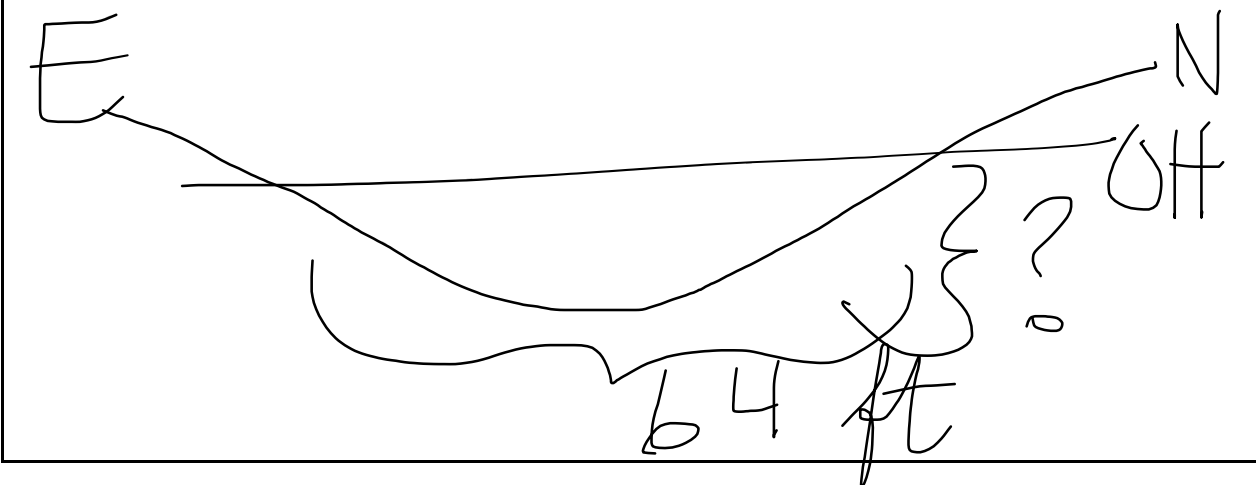
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D04-3

Cross section ID:

Date: 8/27/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☐

Change in average sediment texture

☒

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

OHW same as Top of Bank. Large perennial stream with unknown depth, due to murky waters. OHWM evidenced by break in bank slope and changes in vegetation species and cover.

**Floodplain unit:**☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Early (herbaceous &amp; seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☐

Presence of bed and bank

☐

Benches

☐

Soil development

☐

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

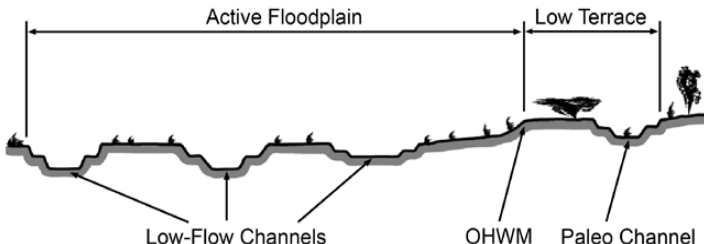
Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

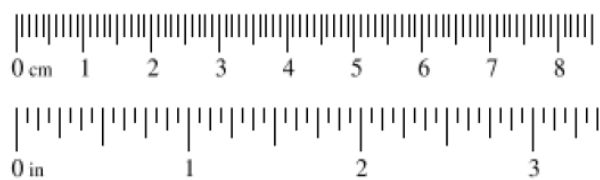
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> SP13-3		<b>Feature ID:</b> D05-3		<b>Date:</b> 8/27/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> PF, TK					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> U.S. 395 south of Alturus <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.47650, -120.54293			
<b>Potential anthropogenic influences on the channel system:</b> Man-made ditch.					
<b>Brief site description:</b> Ditch runs perpendicular to U.S 395, vegetation present in portions of the ditch.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input checked="" type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <div style="margin-left: 20px;">           a) Record the floodplain unit and GPS position.            b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.            c) Identify any indicators present at the location.         </div> 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHW M and record the indicators. Record the OHW M position via: <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer         </div> <div style="text-align: center;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:         </div> </div>					

### Wentworth Size Classes

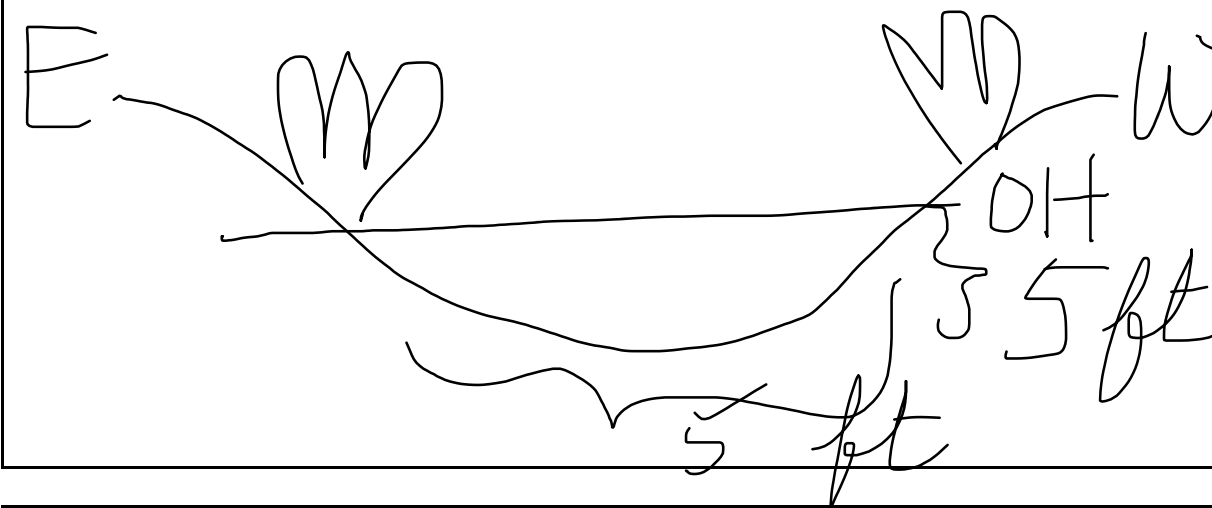
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D05-3

Cross section ID:

Date: 8/27/2019 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**☐

Change in average sediment texture

☒

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

Irrigation canal, no water at time of survey. Constructed bed and bank feature. OHWM evidenced by change in vegetation species and cover, and break in bank slope.

**Floodplain unit:**☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Early (herbaceous &amp; seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☐

Presence of bed and bank

☐

Benches

☐

Soil development

☐

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

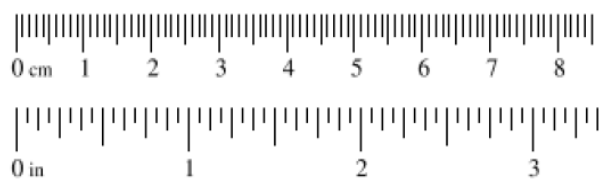
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> SP 100-3		<b>Feature ID:</b> D100-3		<b>Date:</b> 8/26/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 south of Alturas.		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.31926, -120.50740		
<b>Potential anthropogenic influences on the channel system:</b> U.S. 395, fence line present.					
<b>Brief site description:</b> Perennial stream that runs under highway through culvert.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

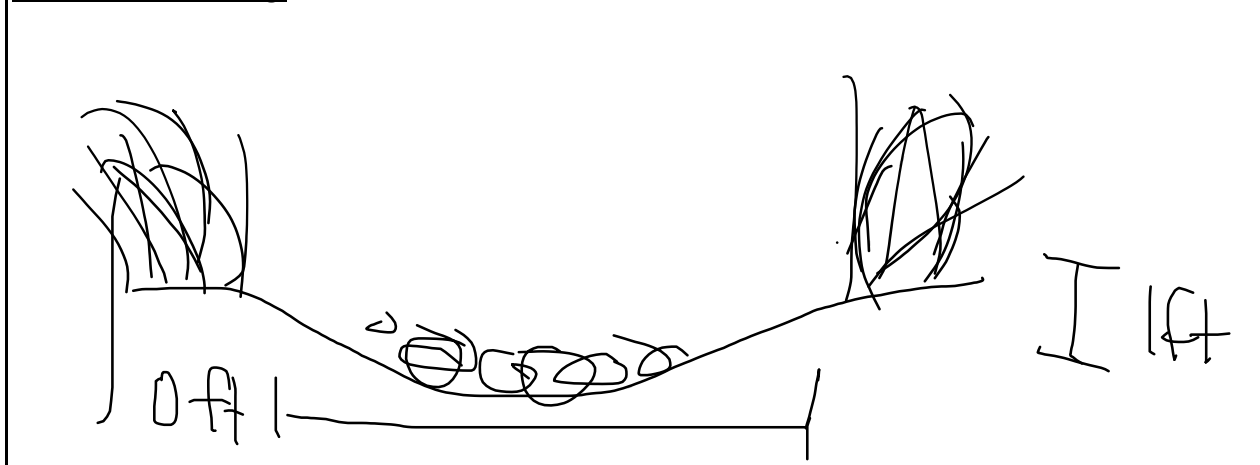
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D100-3

Cross section ID:

Date: 8/26/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

OHW = 25 ft. Bed and bank feature. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Channel dominated by cobble. Sampling point documents a perennial stream.

**Floodplain unit:**☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Cobbles and bouldersTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

☒ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☐ Soil development☒ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Cobbles and boulders within stream bed indicates presence of water. Water is present in the channel at time of survey.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input checked="" type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Average sediment texture silty loam and gravelly.</u>			
Total veg cover: <u>60</u> % Tree: <u>0</u> % Shrub: <u>0</u> % Herb: <u>60</u> %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input checked="" type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input checked="" type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input checked="" type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			
Floodplain unit has marginal wetland species. Floodplain unit terraces just above OHWM.			

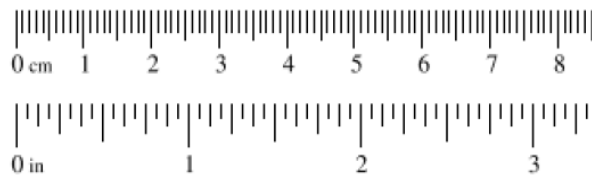
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> SP 101-3		<b>Feature ID:</b> D101-3		<b>Date:</b> 8/26/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 north of Likely.		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.31804, -120.50706		
<b>Potential anthropogenic influences on the channel system:</b> Highway (U.S. 395) and right of way fence line present.					
<b>Brief site description:</b> Dry ephemeral stream that runs into a perennial stream.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

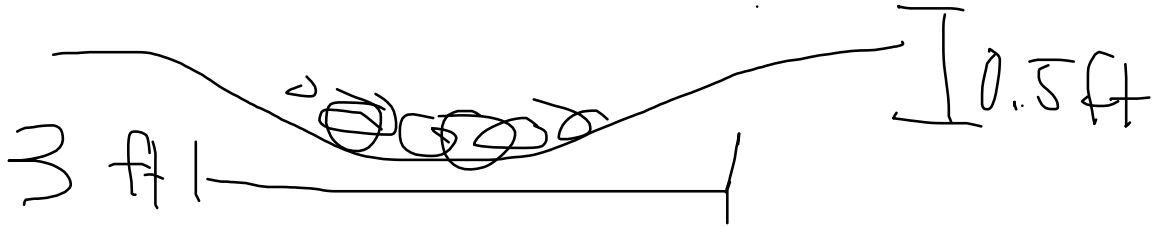
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D101-3

Cross section ID:

Date: 8/26/2019 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species                  | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

**Comments:**

Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

**Floodplain unit:**☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: CobblesTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> NA                  | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

**Indicators:**

- |  |  |
|--|--|
| <input type="checkbox"/> Mudcracks                           | <input type="checkbox"/> Soil development          |
| <input type="checkbox"/> Ripples                             | <input checked="" type="checkbox"/> Surface relief |
| <input type="checkbox"/> Drift and/or debris                 | <input type="checkbox"/> Other: _____              |
| <input checked="" type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____              |
| <input type="checkbox"/> Benches                             | <input type="checkbox"/> Other: _____              |

**Comments:**

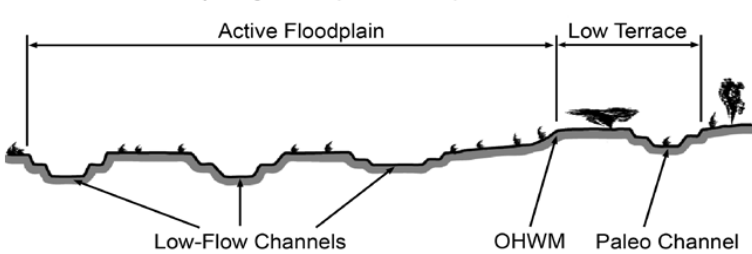
Cobbles within stream bed indicates presence of water likely during storm events.



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Average sediment texture silty loam and gravelly.</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 102-3		<b>Feature ID:</b> D102-3		<b>Date:</b> 8/26/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to U.S. 395 south of Alturas. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.32835, -120.50944			
<b>Potential anthropogenic influences on the channel system:</b> U.S. 395, fence line present.					
<b>Brief site description:</b> Ephemeral stream that runs under highway through a culvert. Dry at time of delineation.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS Imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

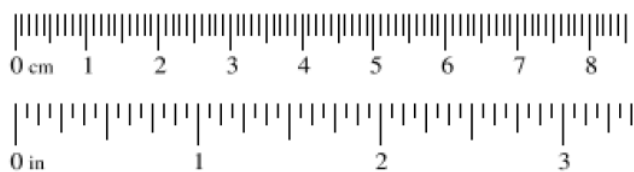
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud

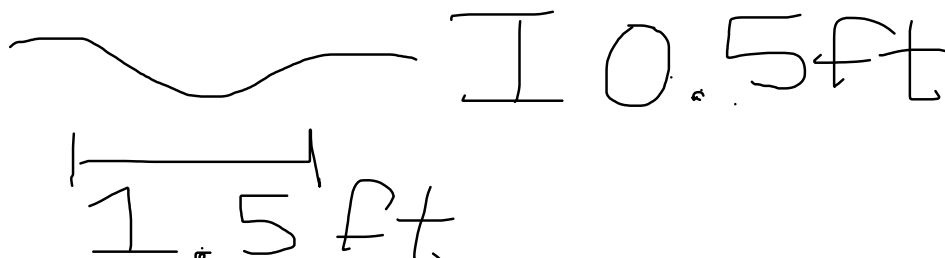


Feature ID: D102-3

Cross section ID:

Date: 8/26/2019

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Bed and bank feature that exhibits scour. OHWM evidenced by moderate break in slope bank, changes to sediment texture, and change in vegetation cover. Sampling point documents an ephemeral stream.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: GravelTotal veg cover: 10 % Tree: 0 % Shrub: 0 % Herb: 10 %

Community successional stage:

☐ NA☒ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Presence of water likely during storm events.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Average sediment texture silty loam and gravelly.</u>			
Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

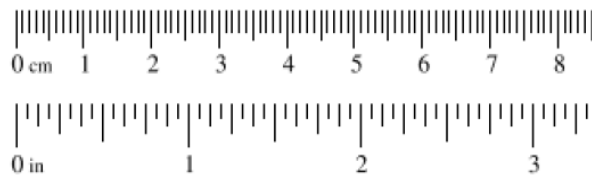
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# **Arid West Ephemeral and Intermittent Streams OHW M Datasheet**

<b>Sampling Point:</b> SP 103-3		<b>Feature ID:</b> D103b-3		<b>Date:</b> 8/26/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395, south of Alturas.		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.33956, -120.51194		
<b>Potential anthropogenic influences on the channel system:</b> U.S. 395, fence line present.					
<b>Brief site description:</b> Ephemeral stream that runs under U.S. 395 through a culvert. Feature currently dry.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p align="center"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

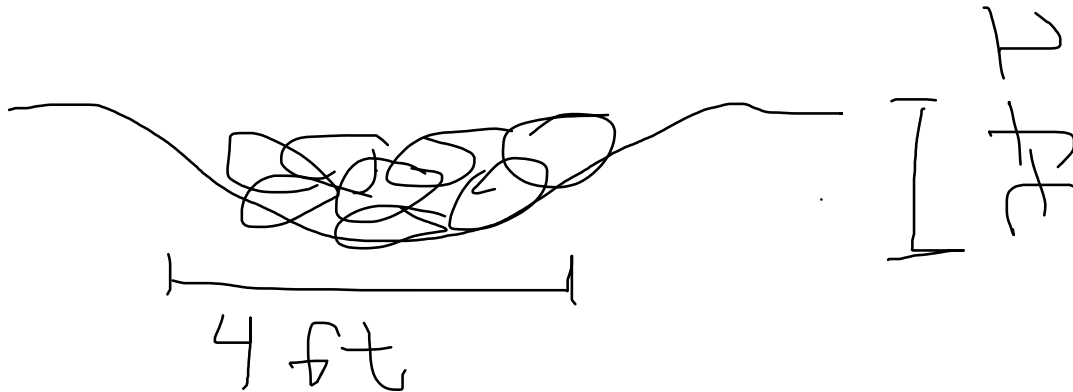
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D103b-3

Cross section ID:

Date: 8/26/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an intermittent stream.

**Floodplain unit:**☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: CobblesTotal veg cover: 5 % Tree: 0 % Shrub: 0 % Herb: 5 %

Community successional stage:

☐ NA☒ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Currently dry, likely has water during winter season.



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Average sediment texture silty loam and gravelly.</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

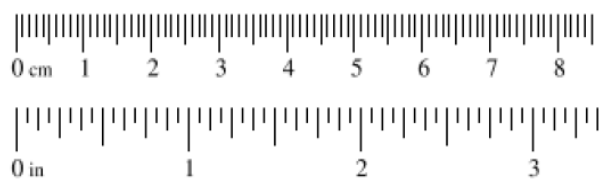
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> SP 106-3		<b>Feature ID:</b> D104-3		<b>Date:</b> 8/26/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to U.S. 395 south of Alturas. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.35712, -120.52408			
<b>Potential anthropogenic influences on the channel system:</b> U.S. 395, fence line present.					
<b>Brief site description:</b> Perennial stream within hay fields, appears to be disturbed by cattle as evidenced by areas of erosion and water pooling.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography <b>Dates:</b> ESRI GIS imagery		<input type="checkbox"/> Stream gage data <b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies		Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<b>Hydrogeomorphic Floodplain Units</b>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D104-3

Cross section ID:

Date: 8/26/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species                  | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

**Comments:**

Perennial stream (Fitzhugh Creek) within hay fields. Manipulated, looks more like an irrigation canal than a stream. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover.

**Floodplain unit:**☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: SiltyTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- |  |  |
|--|--|
| <input type="checkbox"/> NA  | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input checked="" type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

**Indicators:**

- |  |   |
|--|---|
| <input type="checkbox"/> Mudcracks                           | <input type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples                             | <input type="checkbox"/> Surface relief   |
| <input type="checkbox"/> Drift and/or debris                 | <input type="checkbox"/> Other: _____     |
| <input checked="" type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____     |
| <input type="checkbox"/> Benches                             | <input type="checkbox"/> Other: _____     |

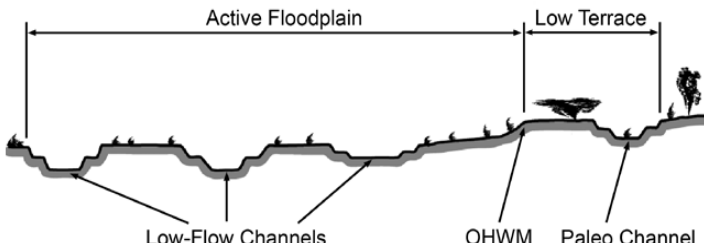
**Comments:**

Water present within creek. Disturbed by cattle.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

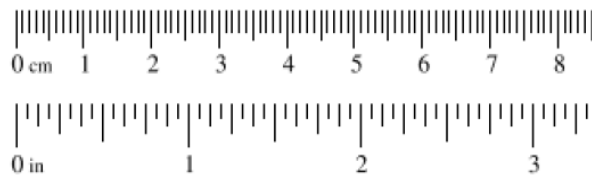
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> <u>107-3</u>		<b>Feature ID:</b> <u>D105-3a</u>		<b>Date:</b> <u>8/27/2019</u>	
<b>Project:</b> <u>Zayo Fiberoptic Interconnect Project</u>					
<b>Location:</b> <u>Modoc County, California</u>			<b>Photo begin/end file#:</b> <u>See Field Photos</u>		
<b>Investigator(s):</b> <u>MO, KD</u>					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> <u>Adjacent to U.S. 395 south of Alturas</u> <b>Projection:</b> <u>Lambert</u> <b>Datum:</b> <u>NAD83</u> <b>Coordinates:</b> <u>41.361286, -120.52995</u>			
<b>Potential anthropogenic influences on the channel system:</b> U.S. 395 and right of way fence line present. Within pasture behind fence, pasture likely used for cattle grazing.					
<b>Brief site description:</b> Irrigation canal that runs parallel to U.S. 395, then travels under highway.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> <u>ESRI GIS imagery</u>  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <input type="checkbox"/> Mapping on aerial photograph    <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Digitized on computer    <input type="checkbox"/> Other: </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D105-3a

Cross section ID:

Date: 8/27/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input checked="" type="checkbox"/> Change in vegetation species       | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

**Comments:**

Constructed bed and bank feature. Disturbed by cattle but has a break in bank slope; water is not flowing so duckweed present as vegetation within canal. Sampling point documents an irrigation canal.

**Floodplain unit:**    ☒ Low-Flow Channel    ☐ Active Floodplain    ☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: 30 % Tree: 0 % Shrub: 0 % Herb: 30 %

Community successional stage:

- |  |  |
|--|--|
| <input type="checkbox"/> NA  | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input checked="" type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

**Indicators:**

- |  |   |
|--|---|
| <input type="checkbox"/> Mudcracks                           | <input type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples                             | <input type="checkbox"/> Surface relief   |
| <input type="checkbox"/> Drift and/or debris                 | <input type="checkbox"/> Other: _____     |
| <input checked="" type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____     |
| <input checked="" type="checkbox"/> Benches                  | <input type="checkbox"/> Other: _____     |

**Comments:**

Irrigation canal with water present. Cattle disturbance and some vegetation present due to ponding water.



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

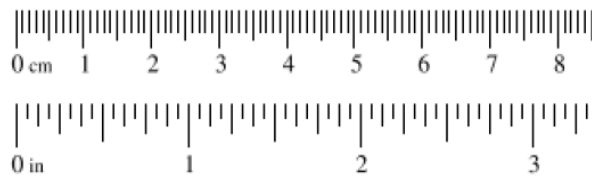
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 200-3		<b>Feature ID:</b> D200-3		<b>Date:</b> 8/26/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc Co, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> Mike Williams/Justin Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.53518, -120.46427		
<b>Potential anthropogenic influences on the channel system:</b> Cattle pasture and highway (U.S. 395) adjacent to feature.					
<b>Brief site description:</b> Dry ephemeral channel located adjacent to U.S. 395 and cattle pasture.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

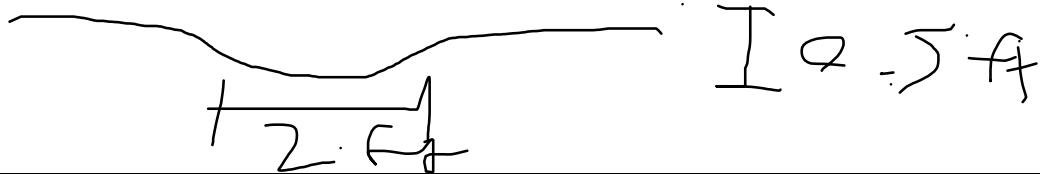


Feature ID: D200-3

Cross section ID:

Date: 8/26/2019 Time:

Cross section drawing:



OHWM

GPS point: \_\_\_\_\_

**Indicators:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species                  | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

**Comments:**

Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

**Floodplain unit:** ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: Silty loam

Total veg cover: 2 % Tree: 0 % Shrub: 0 % Herb: 2 %

Community successional stage:

- |  |  |
|--|--|
| <input type="checkbox"/> NA  | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input checked="" type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

**Indicators:**

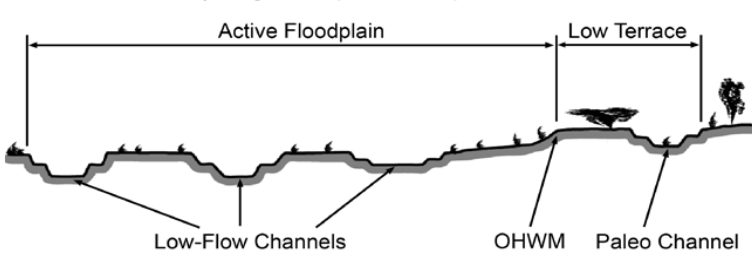
- |  |  |
|--|--|
| <input type="checkbox"/> Mudcracks                           | <input type="checkbox"/> Soil development          |
| <input type="checkbox"/> Ripples                             | <input checked="" type="checkbox"/> Surface relief |
| <input type="checkbox"/> Drift and/or debris                 | <input type="checkbox"/> Other: _____              |
| <input checked="" type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____              |
| <input type="checkbox"/> Benches                             | <input type="checkbox"/> Other: _____              |

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

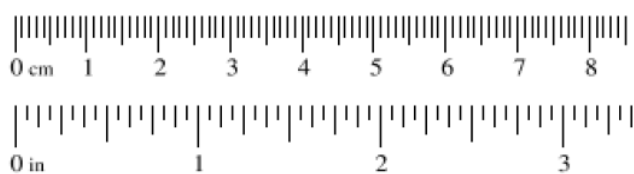
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 201-3		<b>Feature ID:</b> D201-3		<b>Date:</b> 8/26/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc Co, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> Mike Williams/Justin Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to U.S. 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.53513, -120.46432			
<b>Potential anthropogenic influences on the channel system:</b> Cattle pasture and highway (U.S. 395) adjacent to feature.					
<b>Brief site description:</b> Dry ephemeral channel located adjacent to U.S. 395 and cattle pasture.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <div style="margin-left: 20px;">           a) Record the floodplain unit and GPS position.             b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.            c) Identify any indicators present at the location.         </div> 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer         </div> <div style="text-align: center;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:         </div> </div>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

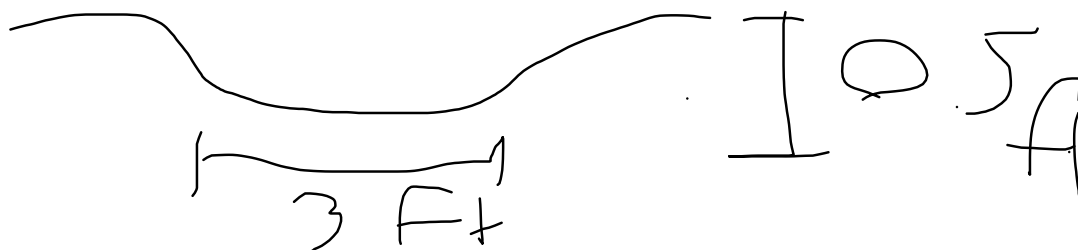


Feature ID: D201-3

Cross section ID:

Date: 8/26/2019

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☐ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Bed and bank feature with scoured channel. OHWM evidenced by break in bank slope and change in vegetation cover. Sampling point documents an ephemeral stream.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: Silty loamTotal veg cover: 2 % Tree: 0 % Shrub: 0 % Herb: 2 %

Community successional stage:

☐ NA☒ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☒ Benches☒ Soil development☒ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

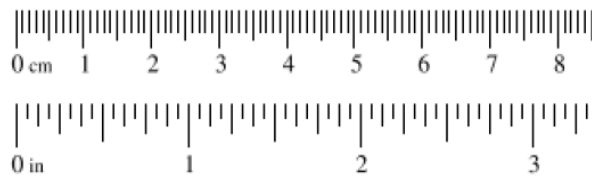
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 202-3		<b>Feature ID:</b> D202-3		<b>Date:</b> 8/26/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc Co, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> Mike Williams/Justin Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 north of Alturas		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.54037, -120.45922		
<b>Potential anthropogenic influences on the channel system:</b> Highway (U.S. 395) adjacent to feature.					
<b>Brief site description:</b> Dry ephemeral channel located adjacent to U.S. 395.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

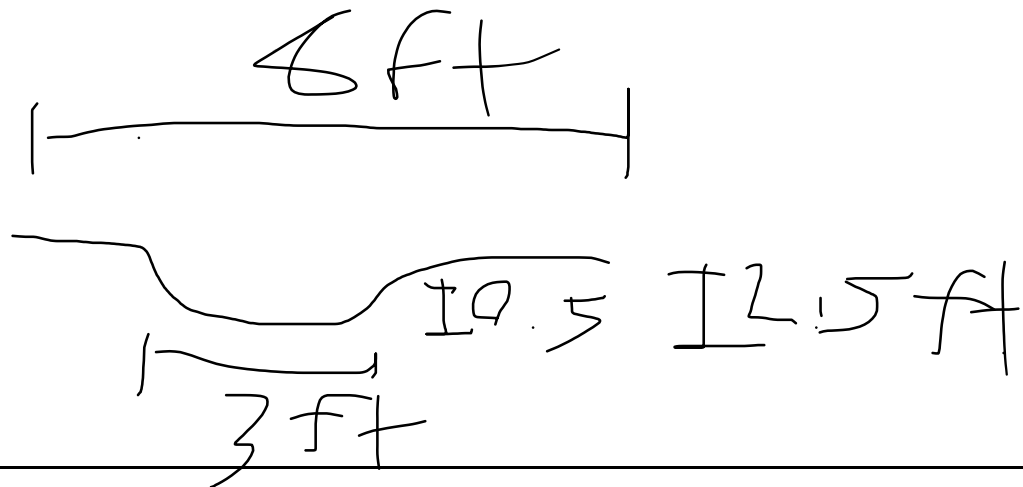
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D202-3

Cross section ID:

Date: 8/26/2019 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species                  | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

**Comments:**

Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

**Floodplain unit:** ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Sandy loamTotal veg cover: 10 % Tree: 0 % Shrub: 0 % Herb: 10 %

Community successional stage:

- |  |  |
|--|--|
| <input type="checkbox"/> NA  | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input checked="" type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

**Indicators:**

- |  |  |
|--|--|
| <input type="checkbox"/> Mudcracks                           | <input checked="" type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples                             | <input checked="" type="checkbox"/> Surface relief   |
| <input type="checkbox"/> Drift and/or debris                 | <input type="checkbox"/> Other: _____                |
| <input checked="" type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____                |
| <input checked="" type="checkbox"/> Benches                  | <input type="checkbox"/> Other: _____                |

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

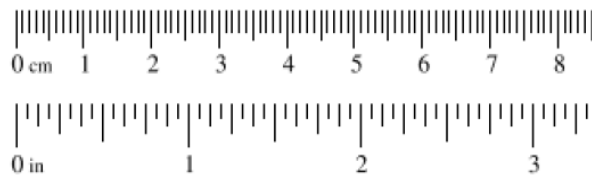
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 203-3		<b>Feature ID:</b> D203-3		<b>Date:</b> 8/26/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc Co, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> Mike Williams/Justin Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 north of Alturas		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.54029, -120.45947		
<b>Potential anthropogenic influences on the channel system:</b> Highway (U.S. 395) adjacent to feature.					
<b>Brief site description:</b> Dry ephemeral channel located adjacent to U.S. 395.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

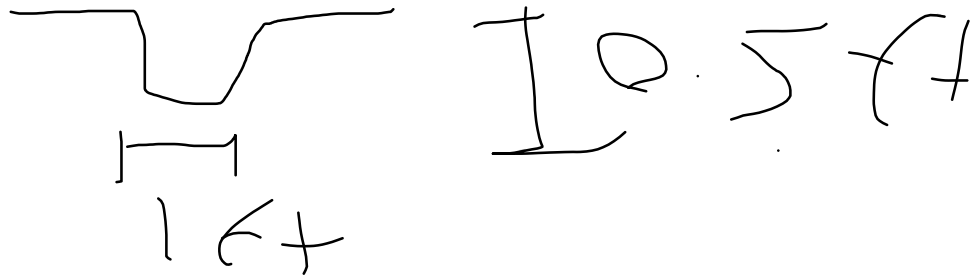


Feature ID: D203-3

Cross section ID:

Date: 8/26/2019 Time:

**Cross section drawing:**



**OHW**

GPS point: \_\_\_\_\_

**Indicators:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species                  | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

**Comments:**

Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

**Floodplain unit:** ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: Sandy loam

Total veg cover: 10 % Tree: 0 % Shrub: 0 % Herb: 10 %

Community successional stage:

- |  |  |
|--|--|
| <input type="checkbox"/> NA  | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input checked="" type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

**Indicators:**

- |  |  |
|--|--|
| <input type="checkbox"/> Mudcracks                           | <input checked="" type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples                             | <input checked="" type="checkbox"/> Surface relief   |
| <input type="checkbox"/> Drift and/or debris                 | <input type="checkbox"/> Other: _____                |
| <input checked="" type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____                |
| <input checked="" type="checkbox"/> Benches                  | <input type="checkbox"/> Other: _____                |

**Comments:**



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

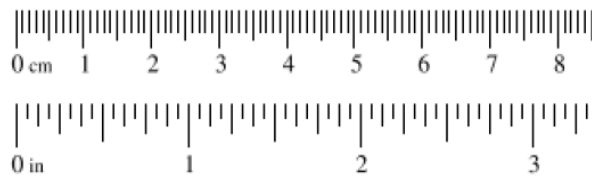
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 204-3		<b>Feature ID:</b> D204-3		<b>Date:</b> 8/26/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc Co, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> Mike Williams/Justin Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 north of Alturas		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.52156, -120.47671		
<b>Potential anthropogenic influences on the channel system:</b> Highway (U.S. 395) adjacent to feature.					
<b>Brief site description:</b> Perennial stream named Parker Creek located adjacent to U.S. 395.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

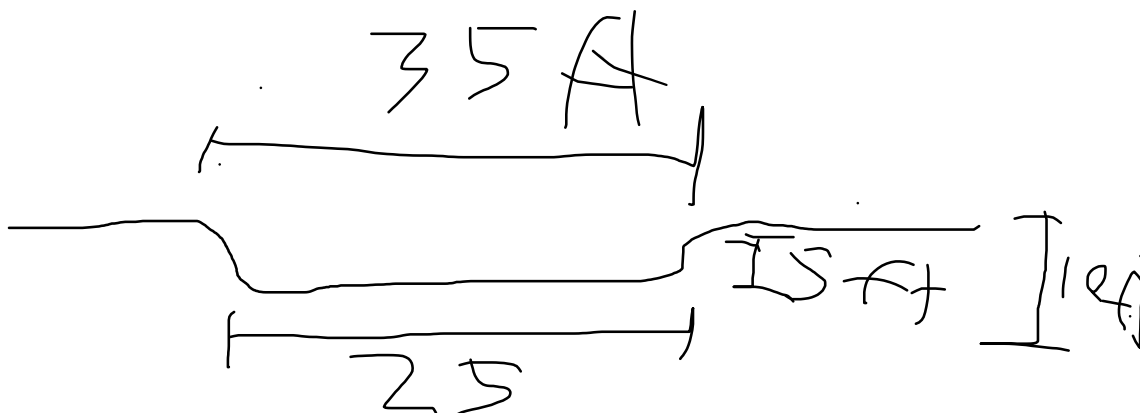
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D204-3

Cross section ID:

Date: 8/26/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input checked="" type="checkbox"/> Change in vegetation species       | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

**Comments:**

OHW = 47.0ft. Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and changes in vegetation species and cover. Sampling point documents a perennial stream.

**Floodplain unit:**☐ Low-Flow Channel☒ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Sandy loamTotal veg cover: 15 % Tree: 0 % Shrub: 5 % Herb: 10 %

Community successional stage:

- |   |  |
|---|--|
| <input type="checkbox"/> NA                             | <input checked="" type="checkbox"/> Mid (herbaceous, shrubs, saplings) |
| <input type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)       |

**Indicators:**

- |  |  |
|--|--|
| <input type="checkbox"/> Mudcracks                           | <input checked="" type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples                             | <input checked="" type="checkbox"/> Surface relief   |
| <input checked="" type="checkbox"/> Drift and/or debris      | <input type="checkbox"/> Other: _____                |
| <input checked="" type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____                |
| <input checked="" type="checkbox"/> Benches                  | <input type="checkbox"/> Other: _____                |

**Comments:**

Named Parker Creek

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

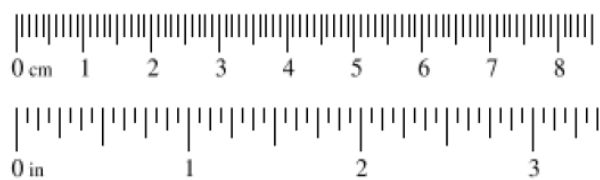
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 205-3		<b>Feature ID:</b> D205-3		<b>Date:</b> 8/27/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc Co, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> Mike Williams/Justin Ahn					
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 north of Alturas		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.51607, -120.48230		
<b>Potential anthropogenic influences on the channel system:</b> Dam constructed just downstream of study area boundary.					
<b>Brief site description:</b> Backwater within project area due to dam on river approximately 400 ft downstream.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW and record the indicators. Record the OHW position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

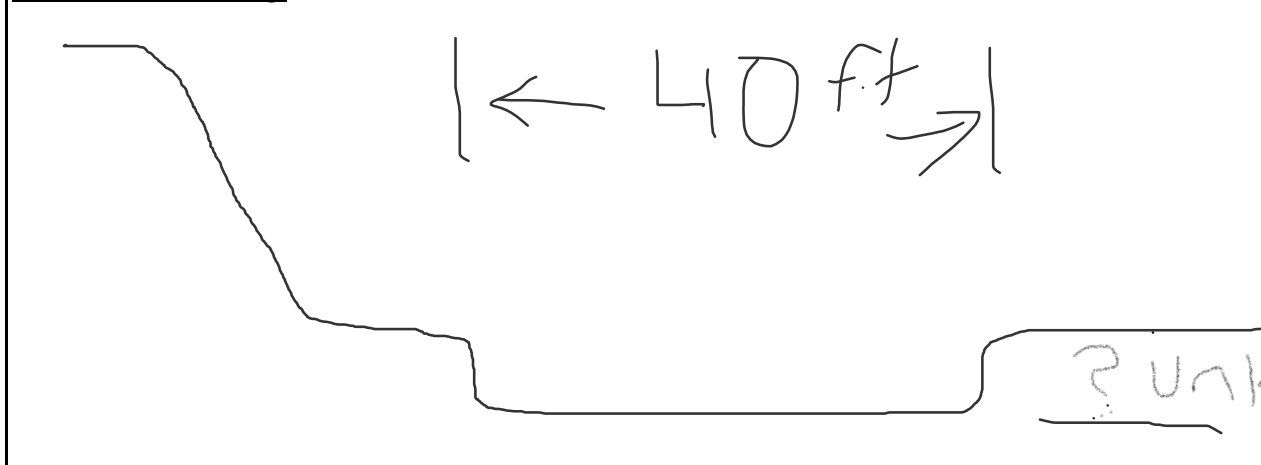
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D205-3

Cross section ID:

Date: 8/27/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☐

Change in average sediment texture

☐

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

Defined bed and bank feature with scoured channel. OHWM evidenced by break in bank slope and change in vegetation cover. Sampling point documents a perennial stream.

**Floodplain unit:**☐

Low-Flow Channel

☒

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Silty loamTotal veg cover: 90 % Tree: 0 % Shrub: 30 % Herb: 60 %

Community successional stage:

☐

NA

☐

Early (herbaceous &amp; seedlings)

☒

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**☐

Mudcracks

☐

Ripples

☒

Drift and/or debris

☒

Presence of bed and bank

☐

Benches

☐

Soil development

☐

Surface relief

☒Other: Inundated☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Alturas/Modoc Co. Sampling Point: 02-3 Feature ID: W01-3  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/26/2019  
 Investigator(s): PF, TK Section, Township, Range: 13, T42N, R12E  
 Local relief (hillside, terrace, etc.): Hillside Local Relief (concave, convex, none): Concave Slope (%): 30  
 Subregion (LRR): D Lat: 41.481373 Long: -120.54232 Datum: NAD 83  
 Soil Map Unit Name: (112) Buntingville clay loam, 0 to 2 percent slopes NWI classification: R2UBH  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? ☐ No Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? ☐ (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No ☐  
 Hydric Soil Present? Yes ☒ No ☐  
 Wetland Hydrology Present? Yes ☒ No ☐  
 Is the Sampled Area within a Wetland? Yes ☒ No ☐

Remarks: Vegetation dominated by FACW species. Hydrology indicator observed. No soil pit due to access, soils assumed hydric based on location and present of other wetland indicators.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	12	_____	_____
5	_____	_____	_____	_____
		12	= Total Cover	
Herb Stratum	(Plot size: 5' radius)			
1	Phaaruru Phalaris arundinacea	60	YES	FACW
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		60	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 25 % Cover of Biotic Crust: 0

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 60	x 2 = 120
FAC species 0	x 3 = 0
FACU species 0	x 4 = 0
UPL species 0	x 5 = 0
Column Totals: 60 (A)	120 (B)
Prevalence Index = B/A = 2	

## Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation  
 Yes 2 - Dominance Test is >50%  
 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes ☒ No ☐

Remarks: Hydrophytic vegetation (FACW) dominant.

SOIL		Sampling Point: 02-3					
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>		
							See notes
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.					<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>							
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>			
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )			
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )			
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Reduced Vertic (F18)			
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Red Parent Material (TF2)			
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)	<input checked="" type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.			
<input type="checkbox"/> Sandy Gleyed Matrix (S4)							
<b>Restrictive Layer (if present):</b>					<b>Hydric Soil Present?</b>		
Type: _____					Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Depth (inches): _____							
<b>Remarks:</b> Hydric soil assumed present. Area is active flood plain of North Fork Pit River. No soil pit, area is not accessible.							
<b>HYDROLOGY</b>							
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>			
<b>Primary Indicators (minimum of one required; check all that apply)</b>							
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)			
<input checked="" type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>		
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____				
Saturation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____				
(includes capillary fringe)							
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>							
<b>Remarks:</b> Hydrology indicator sediment deposits observed.							

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

**Remarks:** Area dominated by upland vegetation. site inaccessible for soil pit. soils assumed non-hydric. No surface indicators of hydrology observed; therefore, assumed no hydrology indicators are present.

Yes ☐ No ☒

**Remarks:** Hydrophytic vegetation not observed. Area dominated by upland species.

SOIL							Sampling Point: 03-3	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
								See notes
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Hydric soil assumed not present. No soil pit, area is not accessible.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicators not observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Alturus/Modoc Co. Sampling Point: 04-3 Feature ID: W02-3  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/26/2019  
 Investigator(s): PF, TK Section, Township, Range: 13, T42N, R12E  
 Local relief (hillside, terrace, etc.): Hillside Local Relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR): D Lat: 41.47793 Long: -120.54236 Datum: NAD 83  
 Soil Map Unit Name: (176) Pit silty clay loam, 0 to 2 percent slopes NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: Feature dominated completely by Juncus effusus and hydrology indicator present. Soils considered problematic hydric soils.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>5' radius</u> )				
1	<u>Juneff Juncus effusus</u>	<u>60</u>	<u>YES</u>	<u>FACW</u>
2	<u>Broine Bromus inermis</u>	<u>15</u>	<u>YES</u>	<u>FACU</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>75</u>		= Total Cover

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 25 % Cover of Biotic Crust: 0

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>60</u>	x 2 =	<u>120</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>15</u>	x 4 =	<u>60</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>75</u> (A)		<u>180</u> (B)
Prevalence Index = B/A =		<u>2.4</u>

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation  
Present?

Yes X No     

Remarks: Hydrophytic vegetation dominant.

SOIL							Sampling Point: 04-3	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-7	10YR 2/1	100					Clay loam	See notes
7-10	10YR, 4/2	100					Sandy loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input checked="" type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Feature is located at the bottom of a road embankment and adjacent to active agricultural activities. Hydric soil indicators are absent from the soil profile. Soils are presumed to be problematic given the adjacent anthropogenic land use/ disturbances and the positive indicators of vegetation and hydrology.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicator water-stained leaves present. Sample point also meets FAC-neutral test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Alturus/Modoc Co. Sampling Point: 05-3 Feature ID: U02-3  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/26/2019  
 Investigator(s): PF, TK Section, Township, Range: 13, T42N, R12E  
 Local relief (hillside, terrace, etc.): Hillside Local Relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR): D Lat: 41.47795 Long: -120.54236 Datum: NAD 83  
 Soil Map Unit Name: (176) Pit silty clay loam, 0 to 2 percent slopes NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland vegetation dominant. Soil pit dug to 1" due to restricted layer (compact roadbase), soils assumed non-hydric. No surface hydrology indicators observed, subsurface indicators of hydrology assumed absent.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u> = Total Cover		

Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
5 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u> = Total Cover		

Herb Stratum (Plot size: <u>5' radius</u> )				
1 <u>Broine</u>	<u>Bromus inermis</u>	<u>80</u>	<u>YES</u>	<u>FACU</u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
5 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
6 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
7 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
8 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
9 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
10 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
11 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>80</u> = Total Cover		

Woody Vine Stratum (Plot size: <u>    </u> )				
1 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u> = Total Cover		

%Bare Ground in Herb Stratum: 5 % Cover of Biotic Crust: 0

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>80</u>	x 4 =	<u>320</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>80</u> (A)		<u>320</u> (B)
Prevalence Index = B/A = <u>4</u>		

### Hydrophytic Vegetation Indicators:

No 1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
     3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes      No X

Remarks: Hydrophytic vegetation not observed. Area dominated by upland species.



SOIL							Sampling Point:		05-3	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Matrix		Redox Features				Texture	Remarks		
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>				
0-1	10 YR 2/2	100					Loam	See notes		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.				
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)										
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)							
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)							
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)							
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)							
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)							
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)										
Restrictive Layer (if present): Type: Compact roadbase gravel Depth (inches): 1					Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
Remarks: Refusal at 1" (compacted roadbase). No hydric soils.										
HYDROLOGY										
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)					Secondary Indicators (2 or more required)					
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )					
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )					
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )					
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)					
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)					
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)					
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)					
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)					
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (includes capillary fringe)					Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:										
Remarks: Hydrology indicators not observed.										

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Point: 07-3 Feature ID: W14-3  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/26/2019  
 Investigator(s): PF, TK Section, Township, Range: 26, T42N, R12E  
 Local relief (hillside, terrace, etc.): Flat Local Relief (concave, convex, none): None Slope (%): 1 - 2%  
 Subregion (LRR): D Lat: 41.45331 Long: -120.54994 Datum: NAD 83  
 Soil Map Unit Name: (174) Pasquetti silty clay loam, drained NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: All three criteria met. Area is a wetland.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		0	= Total Cover	
Herb Stratum	(Plot size: _____ 5' radius _____)			
1	Dispi Distichlis spicata	50	YES	FAC
2	Horjub Hordeum jubatum	15	YES	FAC
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		65	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 20 % Cover of Biotic Crust: 0

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>65</u>	x 3 =	<u>195</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>65</u> (A)		<u>195</u> (B)
Prevalence Index = B/A = <u>3</u>		

### Hydrophytic Vegetation Indicators:

Yes 1 - Rapid Test for Hydrophytic Vegetation  
 Yes 2 - Dominance Test is >50%  
     3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Hydrophytic vegetation (FAC) dominant.

SOIL							Sampling Point: 07-3	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
1-8	10YR 3/2	90	7.5YR 4/4	10	C	M	Silty clay loam	See notes
8-11	10YR 2/1	100					Silty clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: _____ Rock _____ Depth (inches): _____ 11 _____						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Hydric soil indicator Redox Dark Surface (F6)								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> Surface Water (A1)						<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)						<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)						<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )						<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )						<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )						<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input checked="" type="checkbox"/> Surface Soil Cracks (B6)						<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)						<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)						<input type="checkbox"/> Other (Explain in Remarks)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____								
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicator surface soil cracks present.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc Co Sampling Point: 08-3 Feature ID: U14-3  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/26/2019  
 Investigator(s): PF, TK Section, Township, Range: 26, T42N, R12E  
 Local relief (hillside, terrace, etc.): Hillside Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 41.45332 Long: -120.5499 Datum: NAD 83  
 Soil Map Unit Name: (174) Pasquetti silty clay loam, drained NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: All three wetland parameters not met. Area is not a wetland.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		0	= Total Cover	
Herb Stratum	(Plot size: _____ 5' radius)			
1	Broine Bromus inermis	30	YES	FACU
2	Thiint Thinopyrum intermedium	40	YES	UPL
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		70	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 30 % Cover of Biotic Crust: 0

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>30</u>	x 4 =	<u>120</u>
UPL species <u>40</u>	x 5 =	<u>200</u>
Column Totals: <u>70</u> (A)		<u>320</u> (B)
Prevalence Index = B/A = <u>4.5714</u>		

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
  - No 2 - Dominance Test is >50%
  - 3 - Prevalence Index is ≤3.0<sup>1</sup>
  - 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
  - 5 - Wetland Non-Vascular Plants<sup>1</sup>
  - 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Hydrophytic vegetation not observed. Area dominated by upland vegetation.

SOIL		Sampling Point:	08-3					
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features			Texture	Remarks	
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			Loc <sup>2</sup>
0-9	10YR 3/2	100					Loam	Gravel throughout
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)					
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)					
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b> Type: <u>Compact raodbase gravel</u> Depth (inches): <u>9</u>						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Hydric soil indicators not observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>          </u>		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Water Table Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>          </u>					
Saturation Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>          </u>					
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicators not observed								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc Sampling Point: 12-3 Feature ID: W19-3  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/27/2019  
 Investigator(s): PF, TK Section, Township, Range: 2, T41N, R12E  
 Local relief (hillside, terrace, etc.): Floor Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 41.41678 Long: -120.54501 Datum: NAD 83  
 Soil Map Unit Name: (173) Pasquetti silty clay loam, partially drained NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: Feature completely dominated by Phalaris arundinacea. Hydrology documented by water stained leaves and the FAC Neutral test. Problematic soils are present.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		0	= Total Cover	
Herb Stratum	(Plot size: _____ 5' radius _____)			
1	Phaaruu Phalaris arundinacea	100	YES	FACW
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		100	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum:            % Cover of Biotic Crust: 0

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>100</u>	x 2 =	<u>200</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>100</u> (A)		<u>200</u> (B)
Prevalence Index = B/A = <u>2</u>		

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

     3 - Prevalence Index is ≤3.0<sup>1</sup>

     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

     5 - Wetland Non-Vascular Plants<sup>1</sup>

     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Hydrophytic vegetation dominated area.

SOIL							Sampling Point:		12-3	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Matrix		Redox Features				Texture	Remarks		
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>				
0-7	10 yr 3/2	100					Loam	Roots to 4"		
7-15	10 yr 2/1	100					Silty clay loam			
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.										
<sup>2</sup> Location: PL=Pore Lining, M=Matrix.										
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)										
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)				Indicators for Problematic Hydric Soils <sup>3</sup> :			
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)				<input type="checkbox"/> 1 cm Muck (A9) (LRR C)			
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)				<input type="checkbox"/> 2 cm Muck (A10) (LRR B)			
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)				<input type="checkbox"/> Reduced Vertic (F18)			
<input type="checkbox"/> Stratified Layers (A5) (LRR C)			<input type="checkbox"/> Depleted Matrix (F3)				<input type="checkbox"/> Red Parent Material (TF2)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)			<input type="checkbox"/> Redox Dark Surface (F6)				<input checked="" type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)							
<input type="checkbox"/> Sandy Gleyed Matrix (S4)										
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.										
Restrictive Layer (if present):						Hydric Soil Present?				
Type: _____						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Depth (inches): _____										
Remarks: Feature is located at the bottom of a road embankment and adjacent to active agricultural activities. Hydric soil indicators are absent from the soil profile. Soils are problematic given the adjacent anthropogenic land use/ disturbances and dark soil color obscuring redox indicators. Hydric soils are assumed given the positive indicators of vegetation and hydrology.										
HYDROLOGY										
Wetland Hydrology Indicators:						Secondary Indicators (2 or more required)				
Primary Indicators (minimum of one required; check all that apply)										
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) (Riverine)				
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) (Riverine)				
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) (Riverine)				
<input type="checkbox"/> Water Marks (B1) (Nonriverine)			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)				
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)			Other (Explain in Remarks)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)				
Field Observations:						Wetland Hydrology Present?				
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____							
Saturation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____							
(includes capillary fringe)										
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:										
Remarks: Hydrology indicators observed; water stained leaves and FAC Neutral test.										

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Feature ID: U19-3  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/27/2019  
 Investigator(s): PF, TK Section, Township, Range: 2, T41N, R12E  
 Local relief (hillside, terrace, etc.): Roadside Local Relief (concave, convex, none): Convex Slope (%): 10  
 Subregion (LRR): D Lat: 41.41677 Long: -120.54495 Datum: NAD 83  
 Soil Map Unit Name: (173) Pasquetti silty clay loam, partially drained NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Area dominated by Thinopyrum (UPL). No hydric soil indicators or hydrology indicators were observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	12	_____	_____
5	_____	_____	_____	_____
		12	= Total Cover	
Herb Stratum	(Plot size: 5' radius _____)			
1	Thiint Thinopyrum intermedium	70	YES	UPL
2	Broine Bromus inermis	15	NO	FACU
3	Lacser Lactuca serriola	5	NO	FACU
4	Tradub Tragopogon dubia	5	NO	UPL
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		95	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum:      % Cover of Biotic Crust: 0

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant  
Species Across All Strata: 1 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>20</u>	x 4 = <u>80</u>
UPL species <u>75</u>	x 5 = <u>375</u>
Column Totals: <u>95</u> (A)	<u>455</u> (B)
Prevalence Index = B/A = <u>4.7895</u>	

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
     3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation  
Present?

Yes      No X

Remarks: Hydrophytic vegetation not observed. Area dominated by upland species.



<b>SOIL</b>							Sampling Point: 12-3	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10 YR 4/2	100					Gravel loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.
<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
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<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_ Shovel refusal  
 Depth (inches): \_\_\_\_\_ 8

**Hydric Soil Present?**  
 Yes ☐ No ☒

**Remarks:** Hydric soil assumed not present.

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (2 or more required)</b>
<b>Primary Indicators (minimum of one required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)

**Field Observations:**  
 Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

**Wetland Hydrology Present?**  
 Yes ☐ No ☒

**Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:** Hydrology indicators not observed

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/26/2019

Applicant/Owner: Zayo Group State: California Sampling Point: SP 104-3 Feature ID: W100-3

Investigator(s): MO, JA Section, Township, Range: 30, T41N, R13E

Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR): D Lat: 41.35848 Long: -120.52565 Datum: NAD83

Soil Map Unit Name: (112) Buntingville clay loam, 0 to 2 percent slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No     

Hydric Soil Present? Yes x No     

Wetland Hydrology Present? Yes x No     

Is the Sampled Area within a Wetland? Yes x No     

## Evaluation of features designated "Other Waters"

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

Remarks: Wetland parameters are present as indicated by hydrology indicator (water stained leaves, saturation), hydric soils (F6), and a dominance of hydrophytic vegetation.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev. Species Name Absolute Dominant Indicator  
Tree Stratum (Plot size: 30' radius) % Cover Species? Status

1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)

1				
2				
3				
4				
5				
		0	= Total Cover	

Herb Stratum (Plot size: 5' radius)

1	Carneb	Carex nebrascensis	50	YES	OBL
2	Typlat	Typha latifolia	25	YES	OBL
3	Cirarv	Cirsium arvense	3	NO	FACU
4	Menarv	Mentha arvensis	5	NO	FACW
5	Epicil	Epilobium ciliatum	2	NO	FACW
6	Junbal	Juncus balticus	15	NO	FACW
7					
8					
9					
10					
11					
		100	= Total Cover		

Woody Vine Stratum (Plot size:     )

1				
2				
		0	= Total Cover	

% Bare Ground in Herb 0 % Cover of Biotic     

## Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant  
Species Across All Strata: 2 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 1 (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	75	x 1 = 75
FACW species	22	x 2 = 44
FAC species	0	x 3 = 0
FACU species	3	x 4 = 12
UPL species	0	x 5 = 0
Column Totals:	100	(A)
		131 (B)
Prevalence Index = B/A =		1.31

## Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
5 - Wetland Non-Vascular Plants<sup>1</sup>  
6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## Hydrophytic Vegetation Present?

Yes X No     

Remarks: Hydrophytic vegetation present as indicated by a dominance of OBL species.

[illegible]

**WETLAND DETERMINATION DATA FORM -Arid West Region**

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/26/2019

Applicant/Owner: Zayo Group State: California Sampling Point: SP 105-3 Feature ID: U100-3

Investigator(s): MO, JA Section, Township, Range: 30, T41N, R13E

Local relief (hillside, terrace, etc.): Roadside slope Local Relief (concave, convex, none): Convex Slope (%): 20

Subregion (LRR): D Lat: 41.35841 Long: -120.52582 Datum: NAD83

Soil Map Unit Name: (112) Buntingville clay loam, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes      No x

Hydric Soil Present? Yes      No x

Wetland Hydrology Present? Yes      No x

Is the Sampled Area within a Wetland? Yes      No x

**Evaluation of features designated "Other Waters"**

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

Remarks: Sample point lacks all indicators of wetland parameters. Upland pair point to W100-3

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER**

3/3 Abbrev. Species Name Absolute Dominant Indicator  
Tree Stratum (Plot size: 30' radius) % Cover Species? Status

1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)

1	Erinau	Ericameria nauseosa	20	YES	UPL
2					
3					
4					
5					
		<u>20</u>	= Total Cover		

Herb Stratum (Plot size: 5' radius)

1	Brotec	Bromus tectorum	50	YES	UPL
2	THIINT	Thinopyrum intermedium	10	NO	UPL
3	Cirarv	Cirsium arvense	15	NO	FACU
4	Lacser	Lactuca serriola	5	NO	FACU
5					
6					
7					
8					
9					
10					
11					
		<u>80</u>	= Total Cover		

Woody Vine Stratum (Plot size:     )

1				
2				
		<u>0</u>	= Total Cover	

% Bare Ground in Herb 20 % Cover of Biotic     

**Dominance Test worksheet:**

Number of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant  
Species Across All Strata: 2 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:		Multiply by:
OBL species	<u>0</u>	x 1 = <u>0</u>
FACW species	<u>0</u>	x 2 = <u>0</u>
FAC species	<u>0</u>	x 3 = <u>0</u>
FACU species	<u>20</u>	x 4 = <u>80</u>
UPL species	<u>80</u>	x 5 = <u>400</u>
Column Totals:	<u>100</u> (A)	<u>480</u> (B)
Prevalence Index = B/A =		<u>4.8</u>

**Hydrophytic Vegetation Indicators:**

- 1 - Rapid Test for Hydrophytic Vegetation
- No 2 - Dominance Test is >50%
- No 3 - Prevalence Index is ≤3.0<sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants<sup>1</sup>
- 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☐ No ☒

Remarks: Sample point dominated by upland vegetation.

SOIL							Sampling Point:	
SP 105-3								
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 4/3	100					Sandy loam	Roadfill throughout
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>				
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )				
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )				
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Reduced Vertic (F18)				
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Red Parent Material (TF2)				
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b>				<b>Hydric Soil Present?</b>				
Type:	Compact road base gravel			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Depth (inches):	8							
<b>Remarks:</b> Soil point lacks hydric soil indicators, roadside sample point just outside of wetland boundary with roadfill in sample point.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>				
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )				
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )				
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )				
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)				
<b>Field Observations:</b>				<b>Wetland Hydrology Present?</b>				
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):					
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):					
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Alturas/Modoc Sampling Point: 208-3 Feature ID: W205-3  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/27/2019  
 Investigator(s): Mike Williams/Justin Ahn Section, Township, Range: 4, T42N, R13E  
 Local relief (hillside, terrace, etc.): Riverine Local Relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR): D Lat: 41.51602 Long: -120.48224 Datum: NAD 83  
 Soil Map Unit Name: (112) Buntingville clay loam, 0 to 2 percent slopes NWI classification: PSSC  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

**Remarks:** Site hydrology is affected by a dam on the river, which keeps water levels elevated in the study area. Hydrophytic vegetation (FACW) dominant and strong hydrology indicators present. Frequent flooding indicates hydric soils.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u> = Total Cover		

Sapling/Shrub Stratum (Plot size: <u>30' radius</u> )				
1 <u>Salix</u>	<u>Salix exigua</u>	<u>50</u>	<u>YES</u>	<u>FACW</u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
5 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>50</u> = Total Cover		

Herb Stratum (Plot size: <u>30' radius</u> )				
1 <u>Phaar</u>	<u>Phalaris arundinacea</u>	<u>90</u>	<u>YES</u>	<u>FACW</u>
2 <u>Oxyoc</u>	<u>Oxypolis occidentalis</u>	<u>10</u>	<u>NO</u>	<u>OBL</u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
5 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
6 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
7 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
8 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
9 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
10 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
11 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>100</u> = Total Cover		

Woody Vine Stratum (Plot size: <u>    </u> )				
1 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u> = Total Cover		

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>10</u>	x 1 =	<u>10</u>
FACW species <u>140</u>	x 2 =	<u>280</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>150</u> (A)		<u>290</u> (B)
Prevalence Index = B/A = <u>1.9333</u>		

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes X No     

**Remarks:** Area dominated by hydrophytic vegetation (FACW).

SOIL		Sampling Point: 208-3				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.				<sup>4</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>				<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input checked="" type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		<input type="checkbox"/> Reduced Vertic (F18)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Red Parent Material (TF2)			
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )	<input type="checkbox"/> Depleted Matrix (F3)		<input checked="" type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )	<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.			
<b>Restrictive Layer (if present):</b>			<b>Hydric Soil Present?</b>			
Type: _____			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Depth (inches): _____						
<b>Remarks:</b> Feature adjacent to the North Fork Pit River. Hydric soils evidenced by frequent flooding (e.g., drift deposits) and strong hydrophytic vegetation and hydrology indicators.						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>			<b>Secondary Indicators (2 or more required)</b>			
Primary Indicators (minimum of one required; check all that apply)						
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)		<input checked="" type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>			<b>Wetland Hydrology Present?</b>			
Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): 6	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): At surface				
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): At surface				
(includes capillary fringe)						
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> Hydrology indicators observed including surface water, high water table, saturation, drift deposits, and FAC-neutral test.						

**WETLAND DETERMINATION DATA FORM -Arid West Region**

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Alturas/Modoc Sampling Point: 209-3 Feature ID: U205-3  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/27/2019  
 Investigator(s): Mike Williams/Justin Ahn Section, Township, Range: 4, T42N, R13E  
 Local relief (hillside, terrace, etc.): Road slope Local Relief (concave, convex, none): Convex Slope (%): 2  
 Subregion (LRR): D Lat: 41.51605 Long: -120.48208 Datum: NAD 83  
 Soil Map Unit Name: (112) Buntingville clay loam, 0 to 2 percent slopes NWI classification: PSSC  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

**Remarks:** No wetland indicators present. Upland vegetation dominant. Upland pair point to W205-3.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER**

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____ )	% Cover	Species?	Status
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____ 5m x 5m _____ )			
1 Koesco	Kochia scoparia	20	YES	UPL
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
5 _____	_____	_____	_____	_____
		20	= Total Cover	
Herb Stratum	(Plot size: _____ 1 m x 1 m _____ )			
1 Brotec	Bromus tectorum	60	YES	UPL
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
5 _____	_____	_____	_____	_____
6 _____	_____	_____	_____	_____
7 _____	_____	_____	_____	_____
8 _____	_____	_____	_____	_____
9 _____	_____	_____	_____	_____
10 _____	_____	_____	_____	_____
11 _____	_____	_____	_____	_____
		60	= Total Cover	
Woody Vine Stratum	(Plot size: _____ )			
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 40 % Cover of Biotic Crust:     

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>80</u>	x 5 = <u>400</u>
Column Totals: <u>80</u> (A)	<u>400</u> (B)
Prevalence Index = B/A = <u>5</u>	

**Hydrophytic Vegetation Indicators:**

- 1 - Rapid Test for Hydrophytic Vegetation
  - 2 - Dominance Test is >50%
  - 3 - Prevalence Index is ≤3.0<sup>1</sup>
  - 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
  - 5 - Wetland Non-Vascular Plants<sup>1</sup>
  - 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes      No X

**Remarks:** Area was dominated by upland vegetation. Bare ground was gravel roadfill.



SOIL						Sampling Point: 209-3	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features				Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
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<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if present):</b> Type: _____ Compacted roadbase rock Depth (inches): _____ 0	<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
--	--

**Remarks:** Soil pit was not dug, roadfill dense rock.

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**HYDROLOGY**

**Wetland Hydrology Indicators:**

<b>Primary Indicators (minimum of one required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Other (Explain in Remarks)	<b>Secondary Indicators (2 or more required)</b> <input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)
---	--

<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
--	--

**Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:**

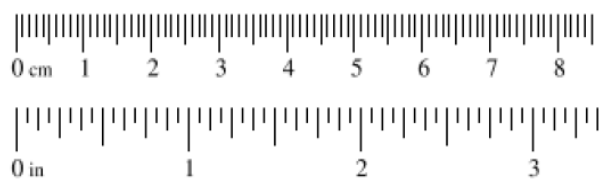
**Remarks:** Hydrology indicators were not observed.

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> SP 02-4		<b>Feature ID:</b> D01-4		<b>Date:</b> 8/26/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 just north of Likely		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.30032, -120.50486		
<b>Potential anthropogenic influences on the channel system:</b> U.S. 395, fence line present.					
<b>Brief site description:</b> Ephemeral stream that runs under highway through double culverts. Stream dry at time of delineation.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D01-4

Cross section ID:

Date: 8/26/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species                  | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

**Comments:**

Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

**Floodplain unit:**    ☒ Low-Flow Channel    ☐ Active Floodplain    ☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: 5 % Tree: 0 % Shrub: 0 % Herb: 5 %

Community successional stage:

- |  |  |
|--|--|
| <input type="checkbox"/> NA  | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input checked="" type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

**Indicators:**

- |  |   |
|--|---|
| <input type="checkbox"/> Mudcracks                           | <input type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples                             | <input type="checkbox"/> Surface relief   |
| <input type="checkbox"/> Drift and/or debris                 | <input type="checkbox"/> Other: _____     |
| <input checked="" type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____     |
| <input type="checkbox"/> Benches                             | <input type="checkbox"/> Other: _____     |

**Comments:**

Dry ephemeral stream, water likely present only in storm events.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

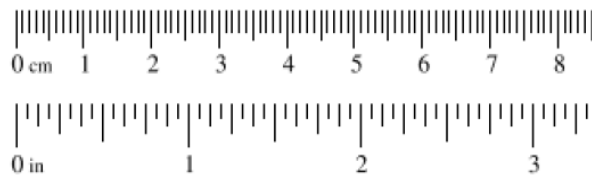
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# **Arid West Ephemeral and Intermittent Streams OHW M Datasheet**

<b>Sampling Point:</b> SP 03-4		<b>Feature ID:</b> D02-4		<b>Date:</b> 8/27/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395, Likely, California		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.23142, -120.50375		
<b>Potential anthropogenic influences on the channel system:</b> U.S. 395 and right of way fence line.					
<b>Brief site description:</b> Irrigation canal that runs under U.S. 395 through a culvert.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p align="center"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

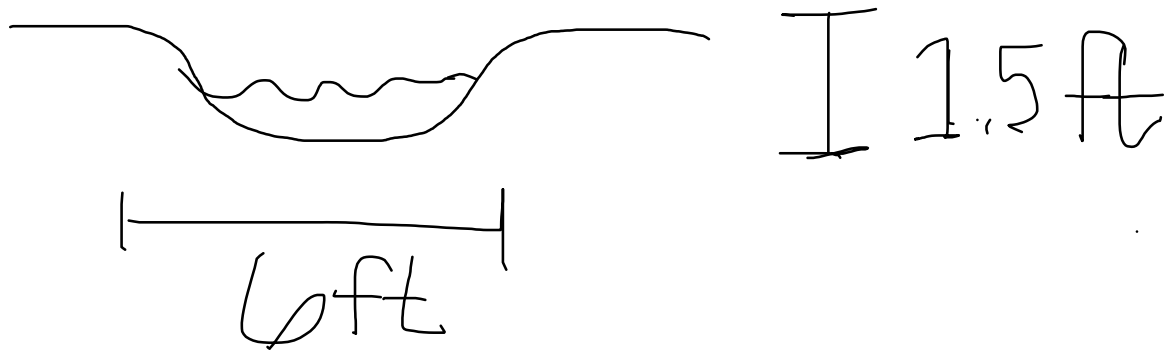
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D02-4

Cross section ID:

Date: 8/27/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species                  | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

**Comments:**

Irrigation canal flowing beneath road through a culvert. Constructed bed and bank feature. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover.

**Floodplain unit:**
☒ Low-Flow Channel    ☐ Active Floodplain    ☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> NA                  | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

**Indicators:**

- |  |   |
|--|---|
| <input type="checkbox"/> Mudcracks                           | <input type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples                             | <input type="checkbox"/> Surface relief   |
| <input type="checkbox"/> Drift and/or debris                 | <input type="checkbox"/> Other: _____     |
| <input checked="" type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____     |
| <input type="checkbox"/> Benches                             | <input type="checkbox"/> Other: _____     |

**Comments:**

Irrigation ditch flowing below road through a culvert. Water present.



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

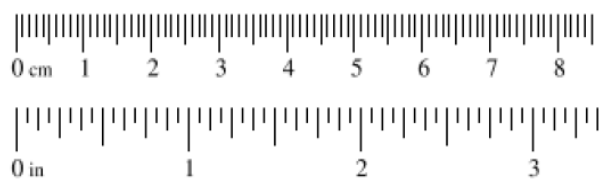
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> SP 06-4		<b>Feature ID:</b> D03-4		<b>Date:</b> 8/27/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395, near Likely.		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.23505, -120.50397		
<b>Potential anthropogenic influences on the channel system:</b> U.S. 395 and fence line present.					
<b>Brief site description:</b> Perennial stream (Dry Creek) flowing under road through a culvert. Minimal stagnant water present.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

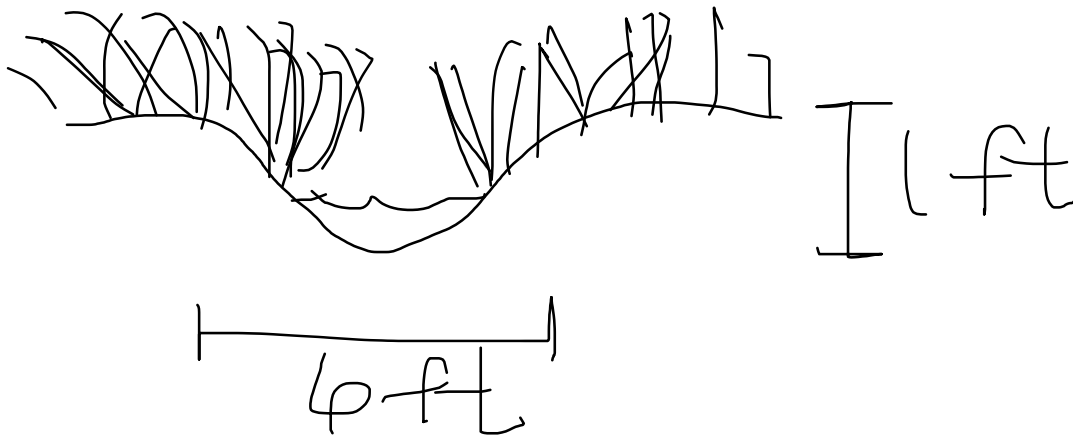
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D03-4

Cross section ID:

Date: 8/27/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species                  | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

**Comments:**

Perennial stream flowing below road through a culvert. Minimal stagnant water present. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover.

**Floodplain unit:**
☒ Low-Flow Channel    ☐ Active Floodplain    ☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: SiltyTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> NA                  | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

**Indicators:**

- |  |   |
|--|---|
| <input type="checkbox"/> Mudcracks                           | <input type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples                             | <input type="checkbox"/> Surface relief   |
| <input type="checkbox"/> Drift and/or debris                 | <input type="checkbox"/> Other: _____     |
| <input checked="" type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____     |
| <input type="checkbox"/> Benches                             | <input type="checkbox"/> Other: _____     |

**Comments:**

Perennial stream flowing below road through a culvert. Minimal stagnant water present.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

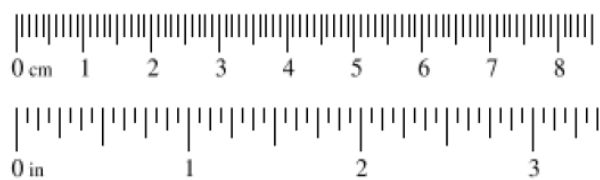
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# **Arid West Ephemeral and Intermittent Streams OHW M Datasheet**

<b>Sampling Point:</b> SP 07-4		<b>Feature ID:</b> D04-4		<b>Date:</b> 8/27/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395, Likely California		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.23716, -120.50399		
<b>Potential anthropogenic influences on the channel system:</b> U.S. 395 and right of way fence line.					
<b>Brief site description:</b> Perennial stream flowing below road through a culvert. Lightly flowing water present. Adjacent to riparian wetland.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

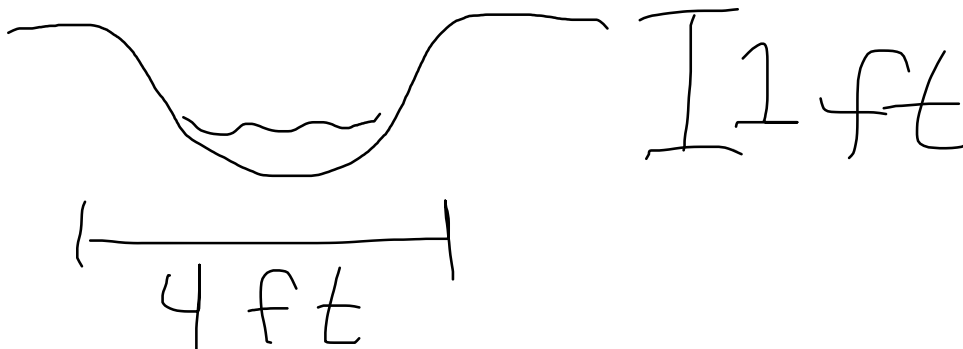
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D04-4

Cross section ID:

Date: 8/27/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Perennial stream flowing below road through a culvert. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover.

**Floodplain unit:**☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: SiltyTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

☒ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Perennial stream flowing below road through a culvert. Lightly flowing water present.



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

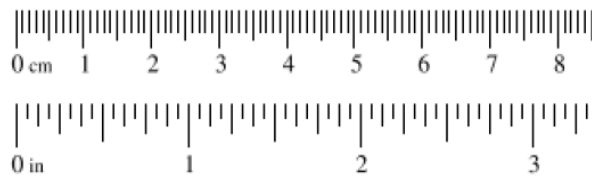
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> SP 08-4		<b>Feature ID:</b> D05-4		<b>Date:</b> 8/27/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 near Likely.		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.23816, -120.50399		
<b>Potential anthropogenic influences on the channel system:</b> U.S. 395 and fence line along right of way.					
<b>Brief site description:</b> Perennial stream (South Fork Pit River) flowing through culvert under U.S. 395. Flowing water present at the time of delineation.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D05-4

Cross section ID:

Date: 8//27/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Perennial stream flowing beneath road through a culvert. Flowing water present. South bank is steep and eroded, north bank is more of a gradual slope. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover.

**Floodplain unit:**☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: Cobble/boulder

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

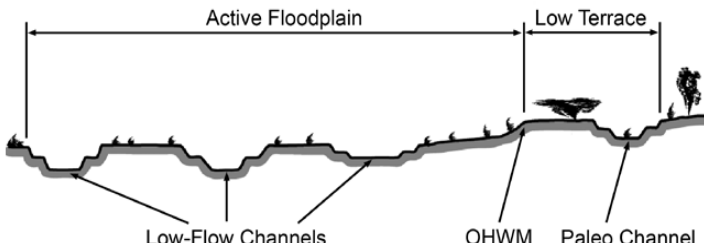
☒ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Perennial stream flowing below road through a culvert. Flowing water present, fast flowing creating gentle rapids over boulders.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

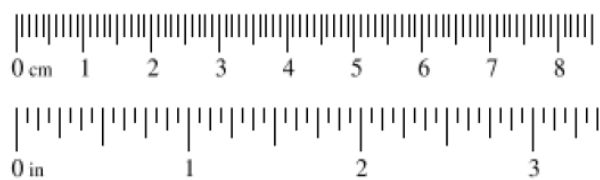
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

### Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> SP 11-4		<b>Feature ID:</b> D06-4		<b>Date:</b> 8/27/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to U.S. 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.24082, -120.50400			
<b>Potential anthropogenic influences on the channel system:</b> U.S. 395 adjacent to feature along with a fence line.					
<b>Brief site description:</b> Irrigation canal with water flowing below road through a culvert. Water present.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other: _____             </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D06-4

Cross section ID:

Date: 8/27/2019 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Irrigation canal with water flowing beneath road through a culvert. Constructed bed and bank feature. OHWM evidenced by change in sediment texture, vegetation cover, and break in bank slope.

**Floodplain unit:**☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: SiltyTotal veg cover: 2 % Tree: 0 % Shrub: 0 % Herb: 2 %

Community successional stage:

☐ NA☒ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Irrigation canal with water flowing below road through a culvert. Water present. Vegetation extends into water.



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

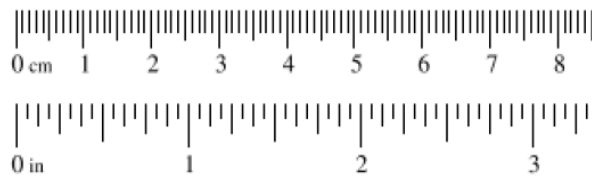
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# **Arid West Ephemeral and Intermittent Streams OHW M Datasheet**

<b>Sampling Point:</b> SP 12-4		<b>Feature ID:</b> D08-4		<b>Date:</b> 8/27/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project.					
<b>Location:</b> Modoc County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 north of Likely.		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.24590, -120.50414		
<b>Potential anthropogenic influences on the channel system:</b> U.S. 395, fence line present.					
<b>Brief site description:</b> Irrigation canal with water flowing below road through a culvert. Water present.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p align="center"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

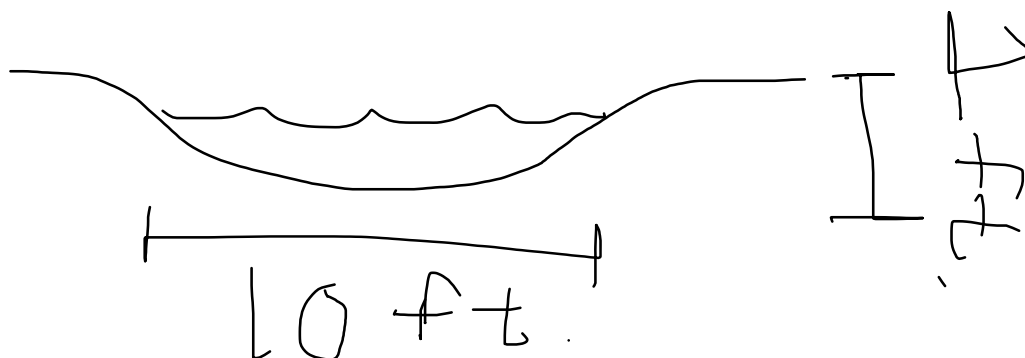
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D08-4

Cross section ID:

Date: 8/27/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

**Comments:**

OHW = 20 ft. Irrigation canal with water flowing below road through a culvert.

Constructed bed and bank feature. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: SiltyTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

**Comments:**

Irrigation canal with water flowing below road through a culvert. Water present.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

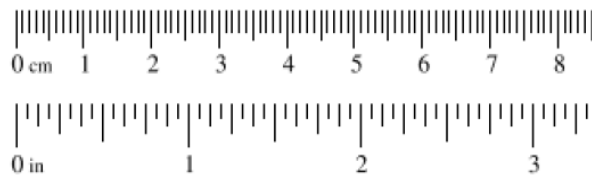
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# **Arid West Ephemeral and Intermittent Streams OHW M Datasheet**

<b>Sampling Point:</b> SP 13-4		<b>Feature ID:</b> D09-4		<b>Date:</b> 8/27/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 just north of Likely.		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.27666, -120.50308		
<b>Potential anthropogenic influences on the channel system:</b> U.S. 395, fence line present.					
<b>Brief site description:</b> Intermittent stream (Romero Creek) crosses U.S 395 through a culvert. Stream dry at time of delineation.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p align="center"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

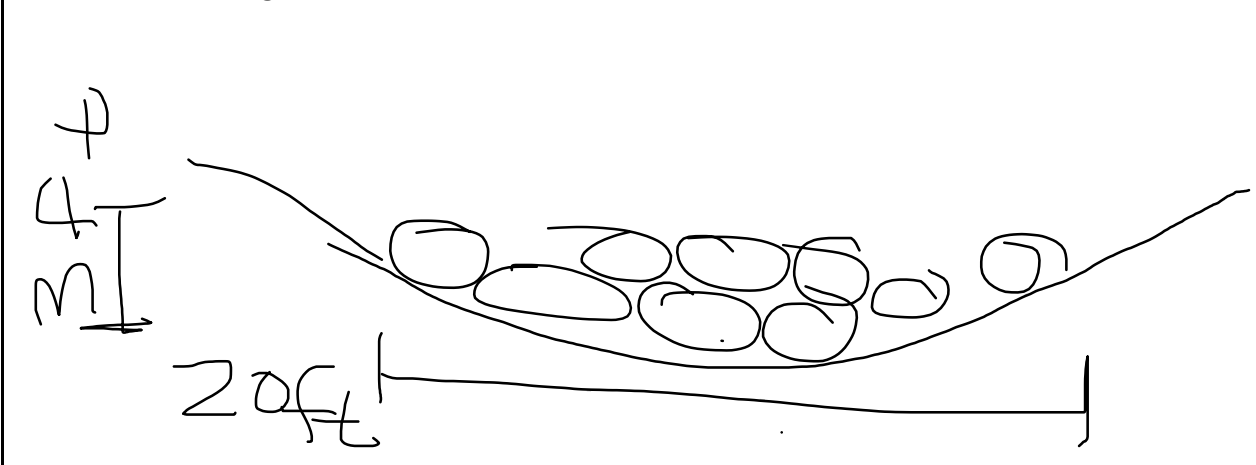
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D09-4

Cross section ID:

Date: 8/27/2019 Time:

**Cross section drawing:****OHWL**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

OHWL = 25 ft. Dry, intermittent stream (Romero Creek). OHWL evidenced by a change in sediment texture, break in bank slope, and change in vegetation cover.

**Floodplain unit:**☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: BouldersTotal veg cover: 10 % Tree: 0 % Shrub: 10 % Herb: 0 %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☒ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Dry, intermittent stream (Romero Creek), crosses a road through a culvert. Vegetation extends into stream channel.



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

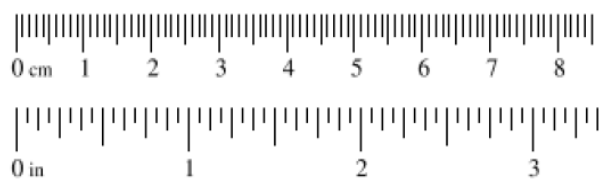
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> SP100-4		<b>Feature ID:</b> D100-4		<b>Date:</b> 8/27/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> PF, TK					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395, Likely, California		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.22461, -120.50368		
<b>Potential anthropogenic influences on the channel system:</b> Adjacent to U.S. 395 and agriculture.					
<b>Brief site description:</b> Perennial stream channelized within study area. Top of bank and ordinary high water mark are the same. No floodplain.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input checked="" type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW and record the indicators. Record the OHW position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

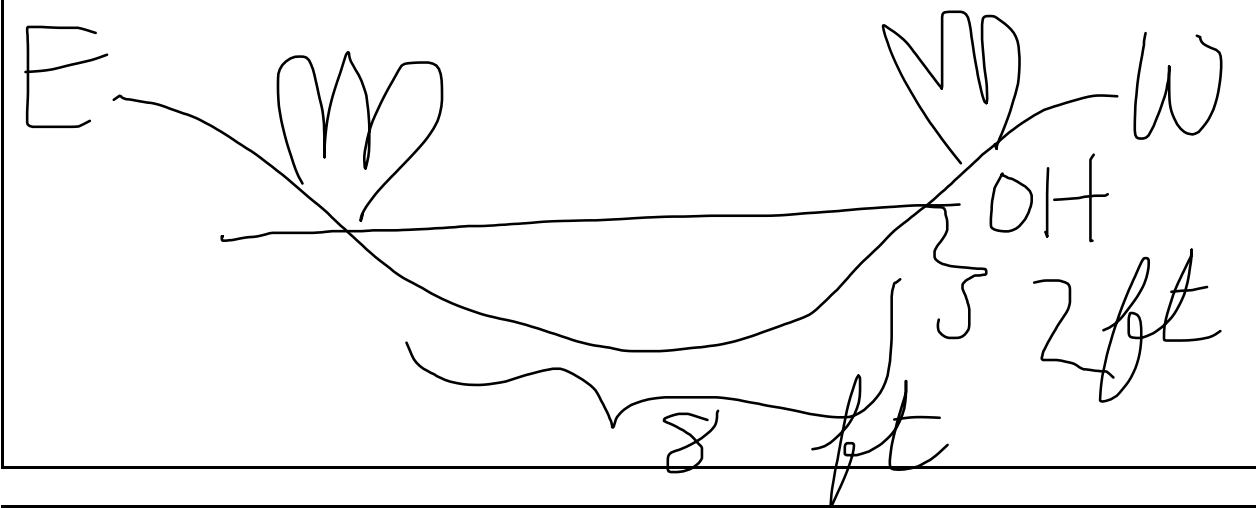
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D100-4

Cross section ID:

Date: 8/27/2019 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**☐

Change in average sediment texture

☒

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

OHWM width 12 ft. Defined bed and bank feature with scoured channel. OHWM evidenced by break in bank slope, and change in vegetation species and cover. Sampling point documents perennial stream.

**Floodplain unit:**☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Early (herbaceous &amp; seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☐

Presence of bed and bank

☐

Benches

☐

Soil development

☐

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

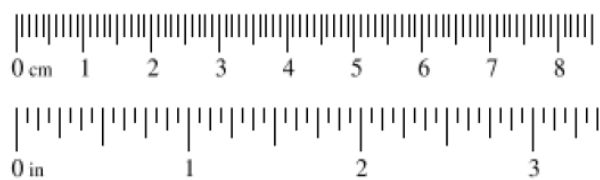
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 200-4		<b>Feature ID:</b> D200-4		<b>Date:</b> 8/27/2019																					
<b>Project:</b> Zayo Fiberoptic Interconnect Project																									
<b>Location:</b> Lassen Co, California			<b>Photo begin/end file#:</b> See Field Photos																						
<b>Investigator(s):</b> Mike Williams/Justin Ahn																									
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.07135, -120.47135																						
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?																								
<b>Potential anthropogenic influences on the channel system:</b> Culvert and adjacent roadway (U.S. 395).																									
<b>Brief site description:</b> Ephemeral stream flows through culvert under roadway.																									
<b>Checklist of resources (if available)</b> <table border="0"> <tr> <td><input checked="" type="checkbox"/> Aerial photography</td> <td><input type="checkbox"/> Stream gage data</td> </tr> <tr> <td><b>Dates:</b> ESRI GIS imagery</td> <td><b>Gage number:</b></td> </tr> <tr> <td><input checked="" type="checkbox"/> Topographic maps</td> <td>Period of record:</td> </tr> <tr> <td><input type="checkbox"/> Geologic maps</td> <td><input type="checkbox"/> History of recent effective discharges</td> </tr> <tr> <td><input type="checkbox"/> Vegetation maps</td> <td><input type="checkbox"/> Results of flood frequency analysis</td> </tr> <tr> <td><input checked="" type="checkbox"/> Soils maps</td> <td><input type="checkbox"/> Most recent shift-adjusted rating</td> </tr> <tr> <td><input type="checkbox"/> Rainfall/precipitation maps</td> <td><input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event</td> </tr> <tr> <td><input type="checkbox"/> Existing delineation(s) for site</td> <td></td> </tr> <tr> <td><input checked="" type="checkbox"/> Global positioning system (GPS)</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Other studies</td> <td></td> </tr> </table>						<input checked="" type="checkbox"/> Aerial photography	<input type="checkbox"/> Stream gage data	<b>Dates:</b> ESRI GIS imagery	<b>Gage number:</b>	<input checked="" type="checkbox"/> Topographic maps	Period of record:	<input type="checkbox"/> Geologic maps	<input type="checkbox"/> History of recent effective discharges	<input type="checkbox"/> Vegetation maps	<input type="checkbox"/> Results of flood frequency analysis	<input checked="" type="checkbox"/> Soils maps	<input type="checkbox"/> Most recent shift-adjusted rating	<input type="checkbox"/> Rainfall/precipitation maps	<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event	<input type="checkbox"/> Existing delineation(s) for site		<input checked="" type="checkbox"/> Global positioning system (GPS)		<input type="checkbox"/> Other studies	
<input checked="" type="checkbox"/> Aerial photography	<input type="checkbox"/> Stream gage data																								
<b>Dates:</b> ESRI GIS imagery	<b>Gage number:</b>																								
<input checked="" type="checkbox"/> Topographic maps	Period of record:																								
<input type="checkbox"/> Geologic maps	<input type="checkbox"/> History of recent effective discharges																								
<input type="checkbox"/> Vegetation maps	<input type="checkbox"/> Results of flood frequency analysis																								
<input checked="" type="checkbox"/> Soils maps	<input type="checkbox"/> Most recent shift-adjusted rating																								
<input type="checkbox"/> Rainfall/precipitation maps	<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event																								
<input type="checkbox"/> Existing delineation(s) for site																									
<input checked="" type="checkbox"/> Global positioning system (GPS)																									
<input type="checkbox"/> Other studies																									
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p> <p style="text-align: center;"> <span>Active Floodplain</span> <span>Low Terrace</span> <span>Low-Flow Channels</span> <span>OHWM</span> <span>Paleo Channel</span> </p>																									
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.           <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW and record the indicators. Record the OHW position via:           <table border="0" style="width: 100%;"> <tr> <td><input type="checkbox"/> Mapping on aerial photograph</td> <td><input checked="" type="checkbox"/> GPS</td> </tr> <tr> <td><input type="checkbox"/> Digitized on computer</td> <td><input type="checkbox"/> Other:</td> </tr> </table> </li> </ol>						<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS	<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:																
<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS																								
<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:																								

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

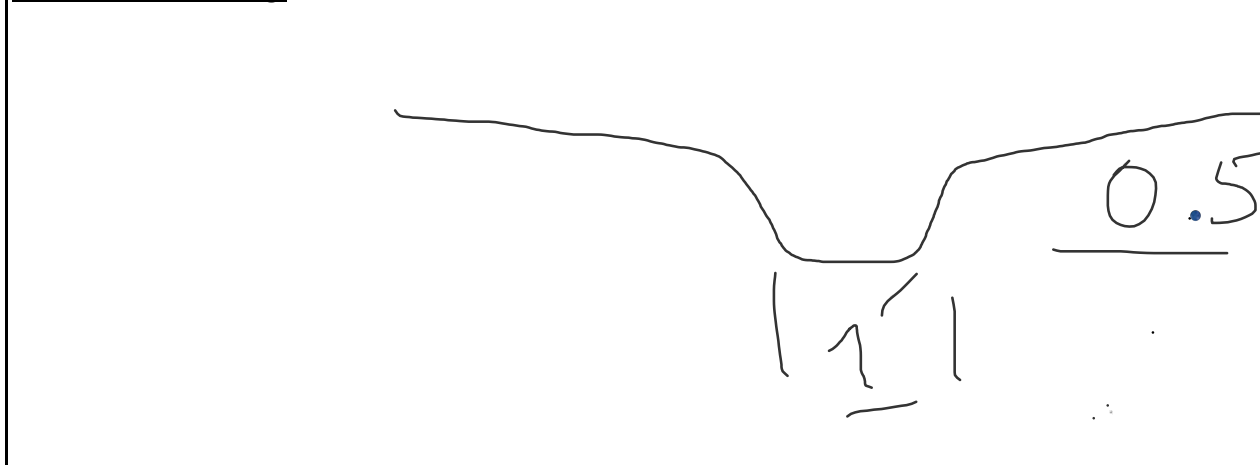


Feature ID: D200-4

Cross section ID:

Date: 8/27/2019 Time:

**Cross section drawing:**



**OHWM**

GPS point: \_\_\_\_\_

**Indicators:**

☒ Change in average sediment texture

☒ Change in vegetation species

☒ Change in vegetation cover

☒ Break in bank slope

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

**Comments:**

Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and changes in vegetation species and cover. Sampling point documents an ephemeral stream.

**Floodplain unit:**

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: Silty loam

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☐ Presence of bed and bank

☐ Benches

☐ Soil development

☐ Surface relief

☐ Other: Inundated

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

**Comments:**



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

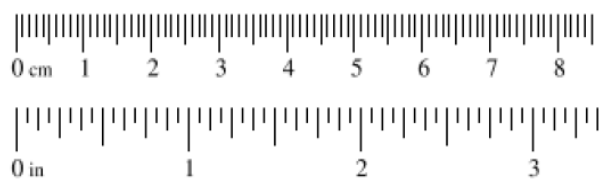
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 201-4		<b>Feature ID:</b> D201-4		<b>Date:</b> 8/27/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen Co, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> Mike Williams/Justin Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 north of Madeline		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.07321, -120.47037		
<b>Potential anthropogenic influences on the channel system:</b> Adjacent roadway (U.S. 395) and culvert.					
<b>Brief site description:</b> Ephemeral stream flows through culvert under roadway.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

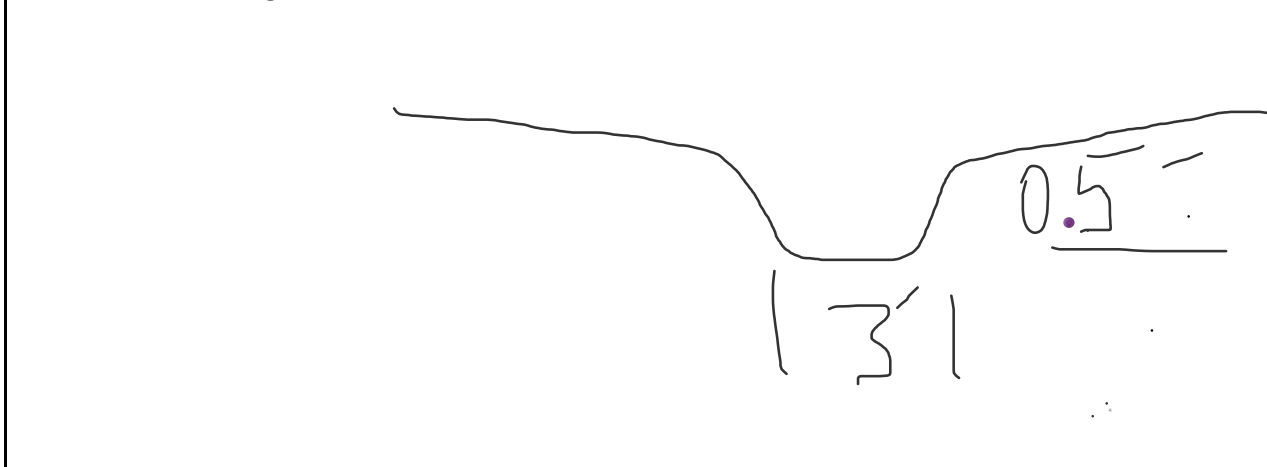


Feature ID: D201-4

Cross section ID:

Date: 8/27/2019 Time:

**Cross section drawing:**



**OHWM**

GPS point: \_\_\_\_\_

**Indicators:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species                  | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

**Comments:**

Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

**Floodplain unit:**

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: Silty loam

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

- |   |  |
|---|--|
| <input type="checkbox"/> NA                             | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

**Indicators:**

- |   |  |
|---|--|
| <input type="checkbox"/> Mudcracks                | <input type="checkbox"/> Soil development        |
| <input type="checkbox"/> Ripples                  | <input type="checkbox"/> Surface relief          |
| <input type="checkbox"/> Drift and/or debris      | <input type="checkbox"/> Other: <u>Inundated</u> |
| <input type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____            |
| <input type="checkbox"/> Benches                  | <input type="checkbox"/> Other: _____            |

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

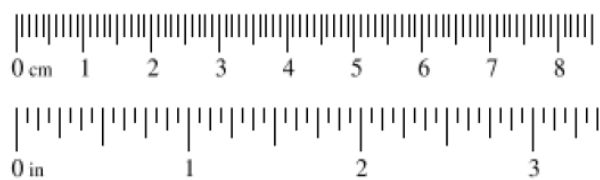
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 204-4		<b>Feature ID:</b> D202-4		<b>Date:</b> 8/27/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen Co, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> Mike Williams/Justin Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 north of Madeline.		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.08493, -120.47043		
<b>Potential anthropogenic influences on the channel system:</b> Culvert and adjacent roadway (U.S. 395).					
<b>Brief site description:</b> Ephemeral stream flowing through culvert under roadway (U.S. 395).					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

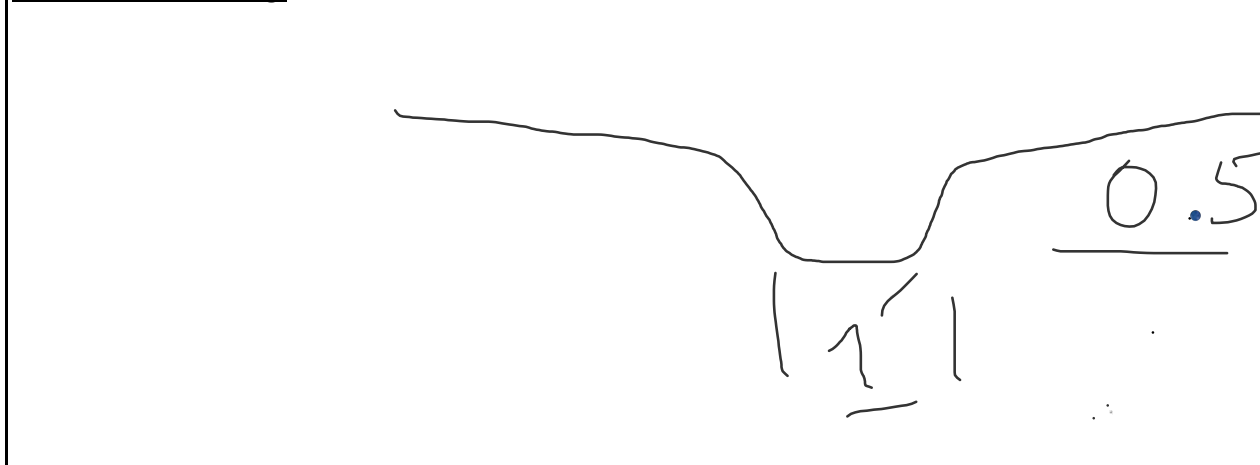
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D202-4

Cross section ID:

Date: 8/27/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☒ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and changes in vegetation species and cover. Sampling point documents an ephemeral stream.

**Floodplain unit:**☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Silty loam

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: Inundated☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

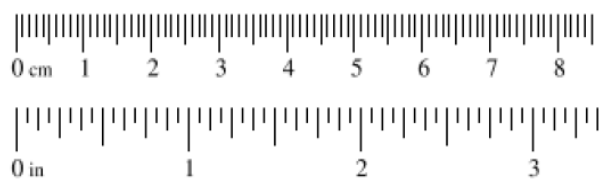
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 205-4		<b>Feature ID:</b> D203-4		<b>Date:</b> 8/27/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen Co, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> Mike Williams/Justin Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 north of Madeline		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.08503, -120.47053		
<b>Potential anthropogenic influences on the channel system:</b> Culvert and adjacent roadway (U.S. 395).					
<b>Brief site description:</b> Ephemeral stream originating alongside roadway - feature collects runoff from roadway and adjacent areas.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

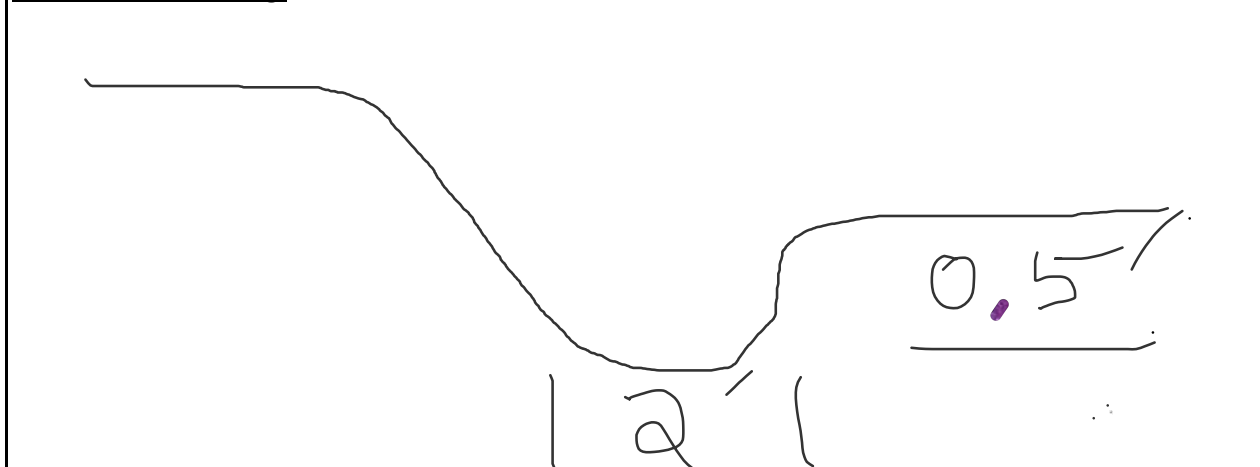
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D203-4

Cross section ID:

Date: 8/27/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

**Floodplain unit:**☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Silty loam

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: Inundated☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

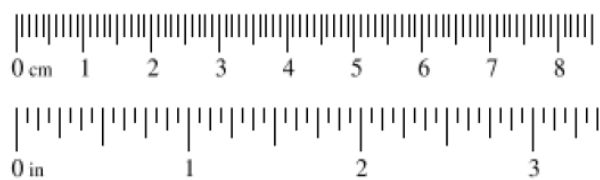
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 206-4		<b>Feature ID:</b> D204-4		<b>Date:</b> 8/27/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen Co, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> Mike Williams/Justin Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 north of Madeline		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.08591, -120.47056		
<b>Potential anthropogenic influences on the channel system:</b> Culvert and adjacent roadway (U.S. 395).					
<b>Brief site description:</b> Ephemeral stream flows through culvert and alongside roadway - feature collects runoff from roadway and adjacent uplands.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

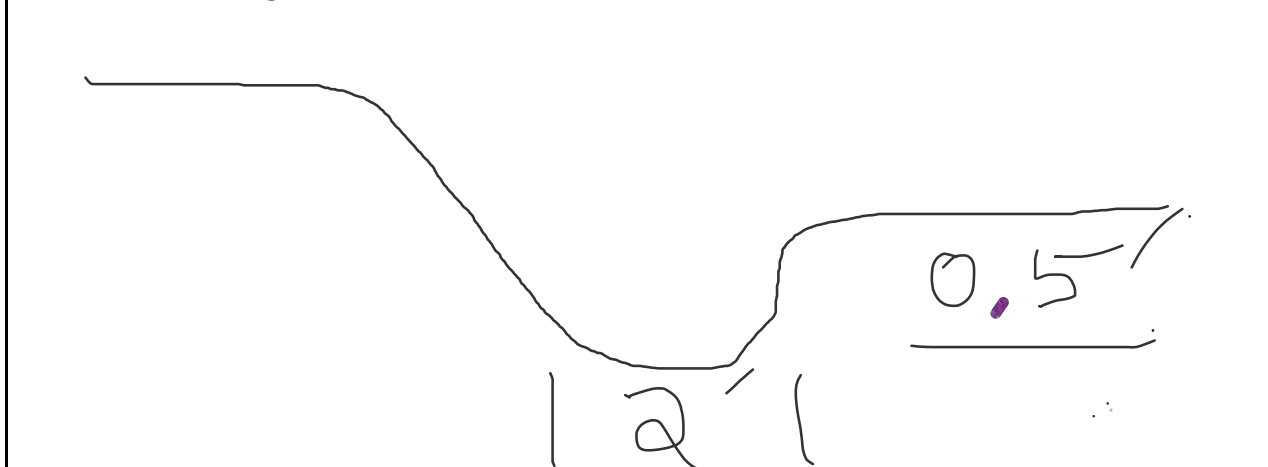
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D204-4

Cross section ID:

Date: 8/27/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species                  | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

**Comments:**

Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

**Floodplain unit:**☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Silty loam

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

- |   |  |
|---|--|
| <input type="checkbox"/> NA                             | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

**Indicators:**

- |   |  |
|---|--|
| <input type="checkbox"/> Mudcracks                | <input type="checkbox"/> Soil development        |
| <input type="checkbox"/> Ripples                  | <input type="checkbox"/> Surface relief          |
| <input type="checkbox"/> Drift and/or debris      | <input type="checkbox"/> Other: <u>Inundated</u> |
| <input type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____            |
| <input type="checkbox"/> Benches                  | <input type="checkbox"/> Other: _____            |

**Comments:**



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

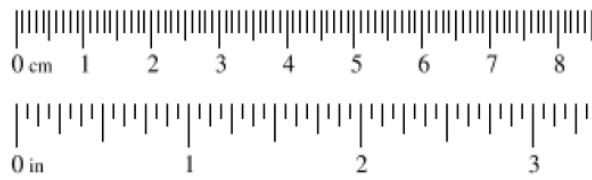
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 209-4		<b>Feature ID:</b> D205-4		<b>Date:</b> 8/28/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen Co, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> Mike Williams/Justin Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 north of Madeline		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.11353, -120.48386		
<b>Potential anthropogenic influences on the channel system:</b> Culvert and adjacent roadway (U.S. 395).					
<b>Brief site description:</b> Ephemeral stream flows through culvert under roadway.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

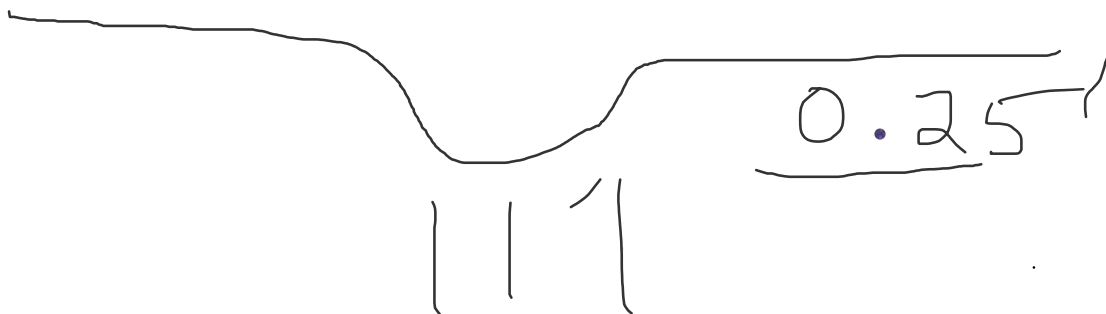
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D205-4

Cross section ID:

Date: 8/28/2019 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☒ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and changes in vegetation species and cover. Sampling point documents an ephemeral stream.

**Floodplain unit:**☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Silty loam

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: Inundated☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

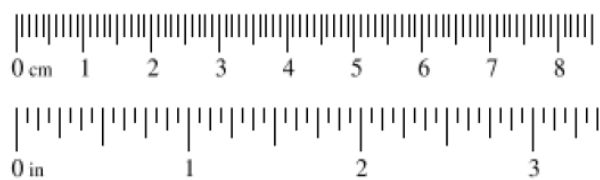
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 210-4		<b>Feature ID:</b> D206-4		<b>Date:</b> 8/28/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen Co, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> Mike Williams/Justin Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 north of Madeline		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.11839, -120.48765		
<b>Potential anthropogenic influences on the channel system:</b> Roadway (U.S. 395).					
<b>Brief site description:</b> Intermittent stream originating outside of project area and flowing parallel to the roadway.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

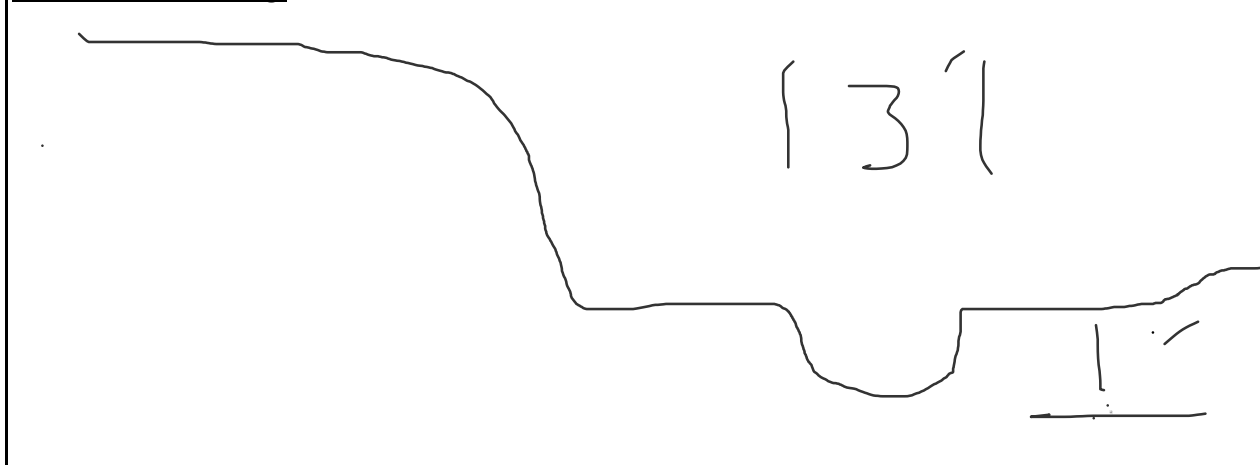
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D206-4

Cross section ID:

Date: 8/28/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☒ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, change in vegetation species and cover. Sampling point documents an intermittent stream.

**Floodplain unit:**☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Silty loam

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: Inundated☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

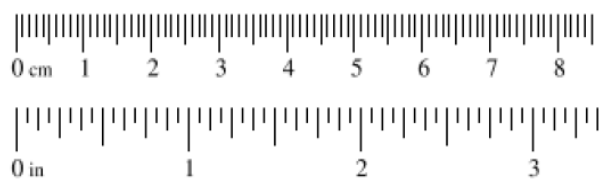
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 211-4		<b>Feature ID:</b> D207-4		<b>Date:</b> 8/28/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen Co, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> Mike Williams/Justin Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 north of Madeline		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.11670, -120.48627		
<b>Potential anthropogenic influences on the channel system:</b> Culvert and adjacent roadway (U.S. 395).					
<b>Brief site description:</b> Ephemeral stream flows through culvert under highway.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

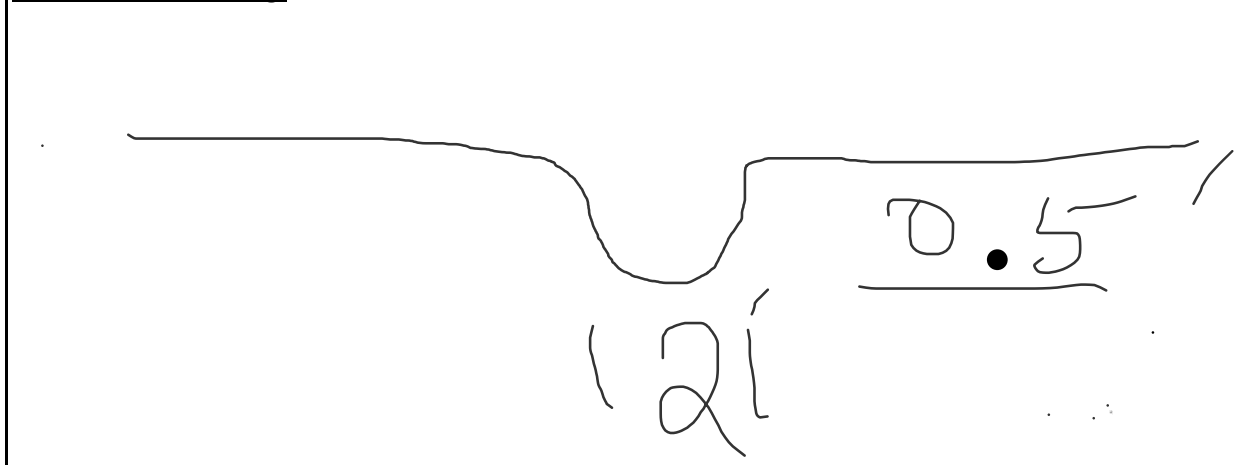
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D207-4

Cross section ID:

Date: 8/28/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

**Comments:**

OHW width 1 ft. Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Silty loam

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris

Other: Inundated

Presence of bed and bank



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

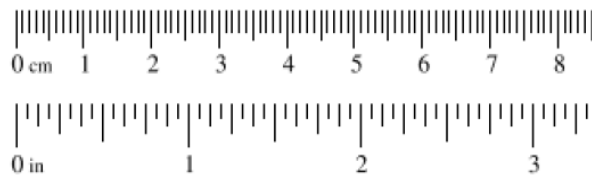
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 212-4		<b>Feature ID:</b> D208-4		<b>Date:</b> 8/28/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen Co, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> Mike Williams/Justin Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 north of Madeline		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.11673, -120.48616		
<b>Potential anthropogenic influences on the channel system:</b> Culvert and adjacent roadway (U.S. 395).					
<b>Brief site description:</b> Ephemeral stream tributary to D207-4 (ephemeral stream).					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW and record the indicators. Record the OHW position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

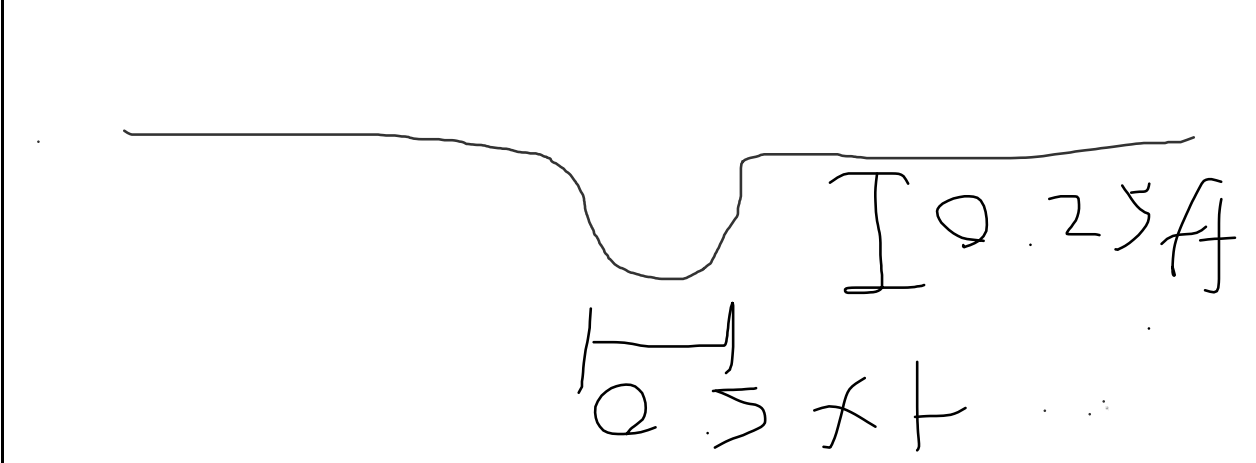
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D208-4

Cross section ID:

Date: 8/28/2019 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

**Floodplain unit:**☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Silty loam

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: Inundated☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

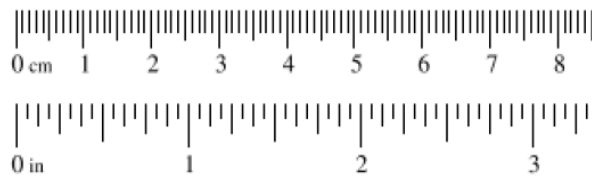
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 213-4		<b>Feature ID:</b> D209-4		<b>Date:</b> 8/28/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen Co, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> Mike Williams/Justin Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 north of Madeline		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.12271, -120.49152		
<b>Potential anthropogenic influences on the channel system:</b> Culvert and roadway (U.S. 395).					
<b>Brief site description:</b> Ephemeral stream flows through culvert under highway.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

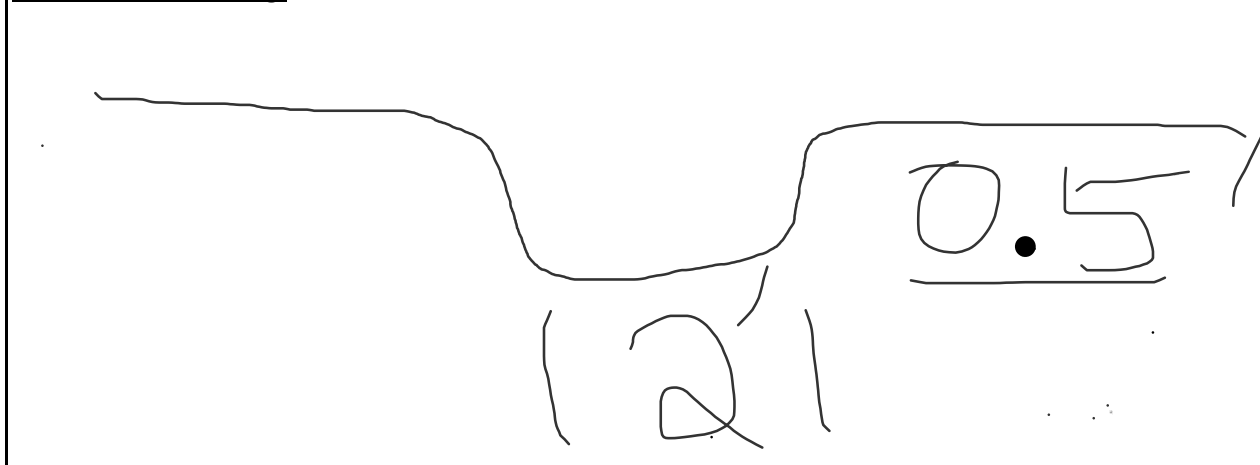
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D209-4

Cross section ID:

Date: 8/28/2019 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

**Comments:**

Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Silty loam

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

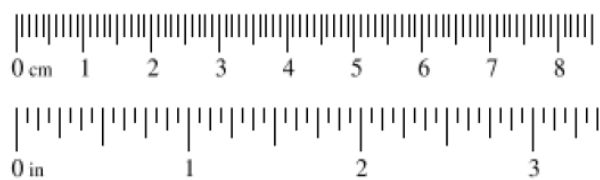
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 214-4		<b>Feature ID:</b> D210-4		<b>Date:</b> 8/28/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen Co, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> Mike Williams/Justin Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to US 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.12245, -120.49130			
<b>Potential anthropogenic influences on the channel system:</b> Culvert and roadway (U.S. 395).					
<b>Brief site description:</b> Ephemeral stream flows through culvert under highway					
<b>Checklist of resources (if available)</b> <input checked="" type="checkbox"/> Aerial photography <input type="checkbox"/> Stream gage data <b>Dates:</b> ESRI GIS imagery <b>Gage number:</b> <input checked="" type="checkbox"/> Topographic maps Period of record: <input type="checkbox"/> Geologic maps <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Vegetation maps <input type="checkbox"/> Results of flood frequency analysis <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and <input type="checkbox"/> Existing delineation(s) for site the most recent event exceeding a 5-year event <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies					
<p style="text-align: center;">Hydrogeomorphic Floodplain Units</p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via: <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other: </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

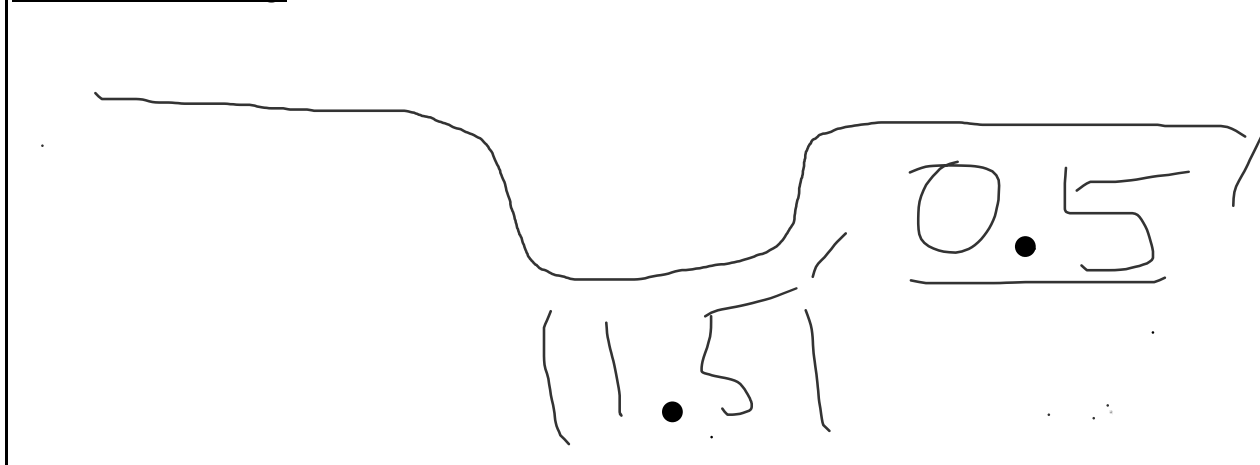


Feature ID: D210-4

Cross section ID:

Date: 8/28/2019 Time:

Cross section drawing:



OHW

GPS point: \_\_\_\_\_

**Indicators:**



Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

Floodplain unit:

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Early (herbaceous & seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**



Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

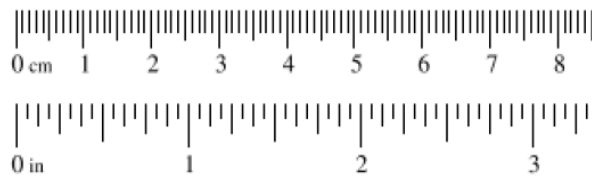
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 217-4		<b>Feature ID:</b> D211-4		<b>Date:</b> 8/28/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> Mike Williams/Justin Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.12866, -120.49969		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
<b>Potential anthropogenic influences on the channel system:</b> Culvert installation and adjacent U.S. 395 roadway.					
<b>Brief site description:</b> Ephemeral stream flows through culvert under U.S. 395.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography <b>Dates:</b> ESRI GIS imagery		<input type="checkbox"/> Stream gage data <b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies		Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

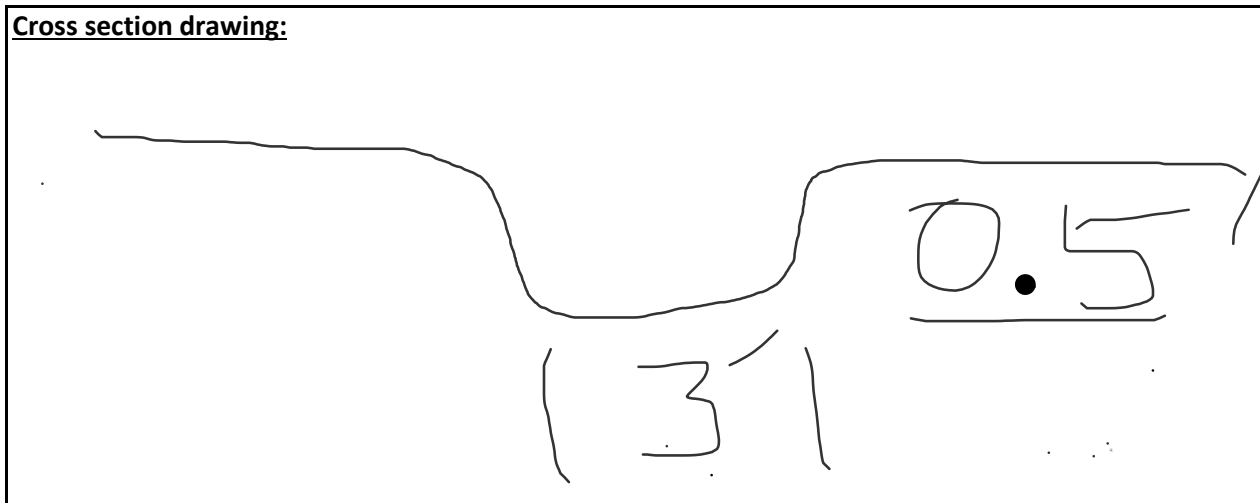
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D211-4

Cross section ID:

Date: 8/28/2019 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

**Comments:**

Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

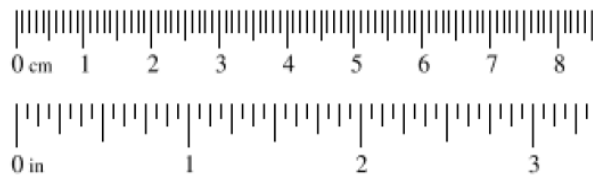
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 218-4		<b>Feature ID:</b> D212-4		<b>Date:</b> 8/28/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> Mike Williams/Justin Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 south of Likely		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.14725, -120.51014		
<b>Potential anthropogenic influences on the channel system:</b> Culvert and roadway (U.S. 395).					
<b>Brief site description:</b> Intermittent stream flows through culvert under U.S. 395.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D212-4

Cross section ID:

Date: 8/28/2019 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an intermittent stream.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

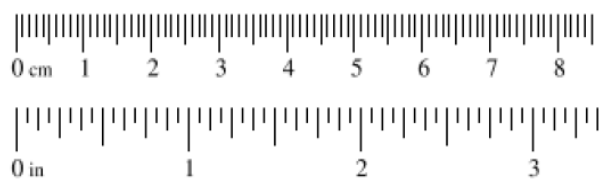
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 219-4		<b>Feature ID:</b> D213-4		<b>Date:</b> 8/28/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> Mike Williams/Justin Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 south of Likely		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.14819, -120.50982		
<b>Potential anthropogenic influences on the channel system:</b> Culvert and adjacent roadway.					
<b>Brief site description:</b> Perennial stream flows through culvert under U.S. 395.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

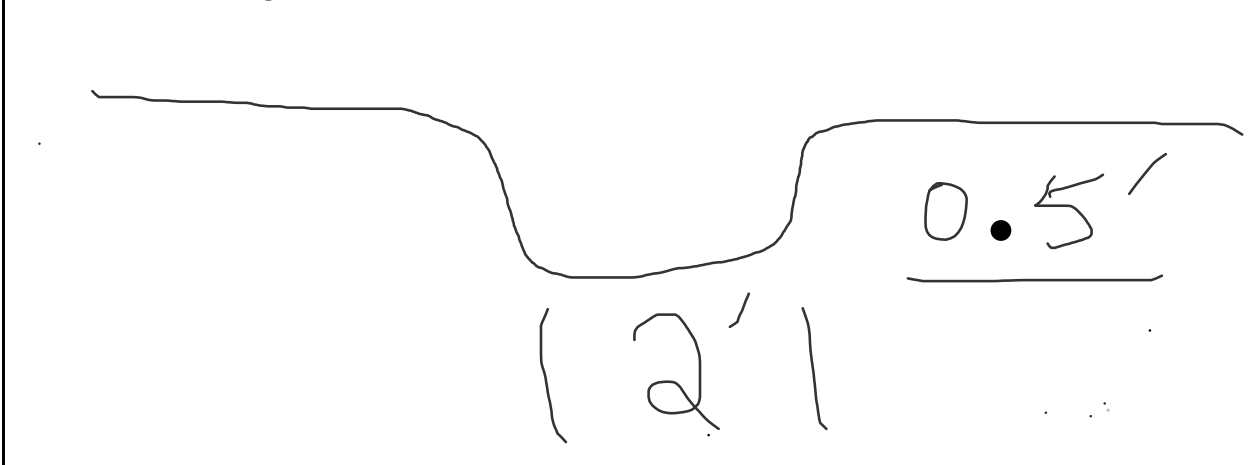
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D213-4

Cross section ID:

Date: 8/28/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Defined bed and bank feature. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents a perennial stream.

**Floodplain unit:**☐ Low-Flow Channel☒ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Silty clayTotal veg cover: 90 % Tree: \_\_\_\_\_ % Shrub: 20 % Herb: 70 %

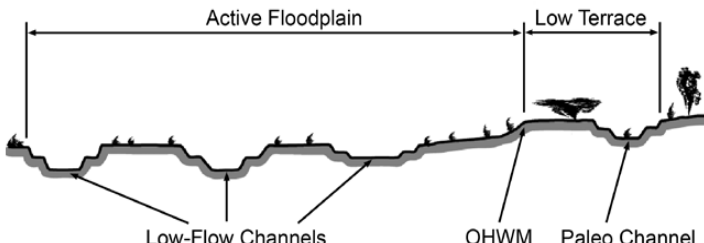
Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☒ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☒ Benches☐ Soil development☒ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

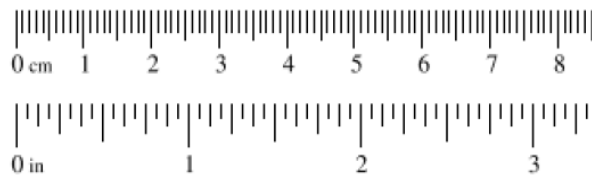
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 300-4		<b>Feature ID:</b> D300-4		<b>Date:</b> 9/13/2019	
<b>Project:</b> Zayo Fiberoptic interconnect Project					
<b>Location:</b> Modoc County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, TK, PF					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to U.S. 395 south of Likely <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.19842, -120.50677			
<b>Potential anthropogenic influences on the channel system:</b> Adjacent to U.S. 395 and agriculture.					
<b>Brief site description:</b> Ephemeral drainage in shrublands at C300-4.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other: _____             </div> </li> </ol>					

### Wentworth Size Classes

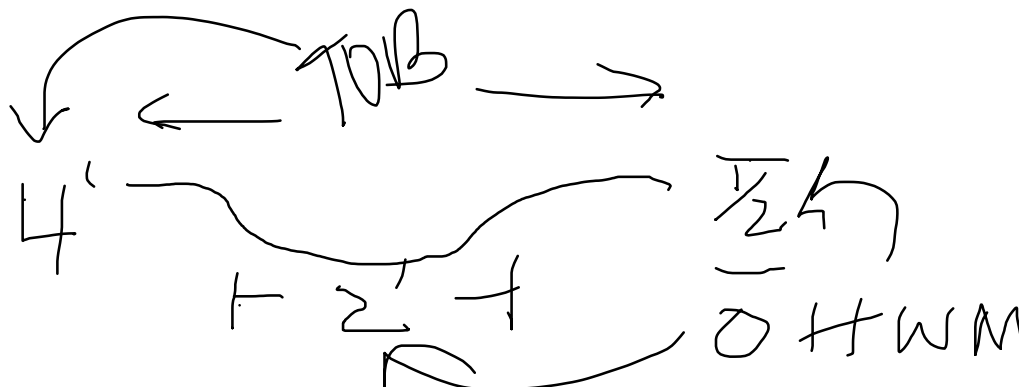
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D300-4

Cross section ID:

Date: 9/13/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☒ Other: Drift deposits☐ Other: \_\_\_\_\_**Comments:**

Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, change in vegetation cover, and drift deposits. Sampling point documents an ephemeral stream.

**Floodplain unit:**☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Raised section with Phalaris only.



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

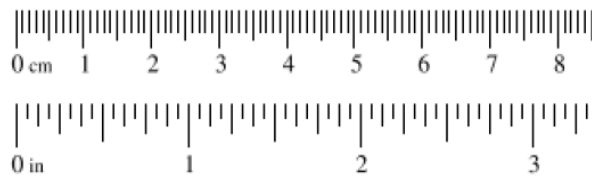
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 301-4		<b>Feature ID:</b> D301-4		<b>Date:</b> 9/13/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, TK, PF					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to U.S. 395 just south of Likely		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.20520, -120.50541		
<b>Potential anthropogenic influences on the channel system:</b> Adjacent to U.S. 395 and agriculture.					
<b>Brief site description:</b> Ephemeral drainage in shrublands. No culvert present . Ordinary high water mark and top of bank are the same.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW and record the indicators. Record the OHW position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

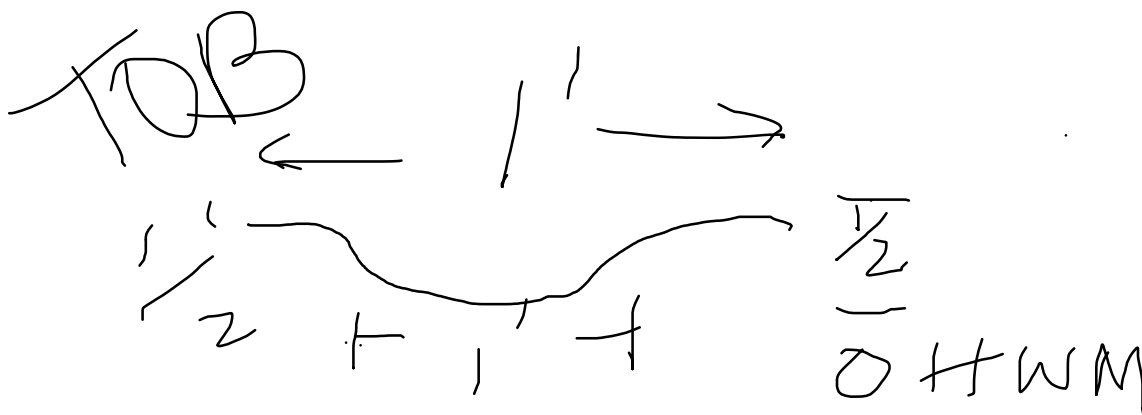
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D301-4

Cross section ID:

Date: 9/13/2019 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☒ Other: Drift deposits☐ Other: \_\_\_\_\_**Comments:**

Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, change in vegetation cover, and drift deposits. Sampling point documents an ephemeral stream

**Floodplain unit:**☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

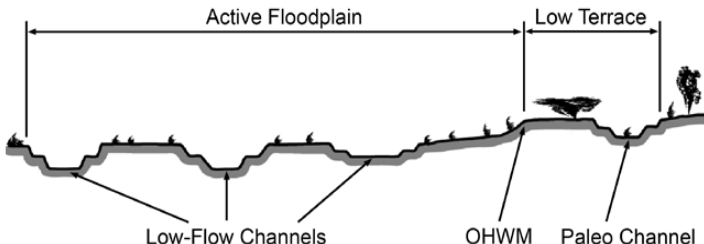
☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Raised section with Phalaris only.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

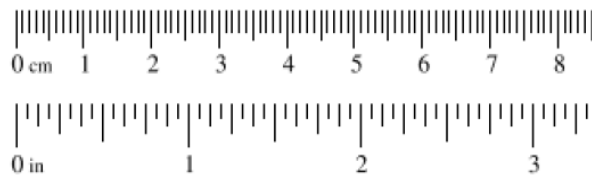
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 302-4		<b>Feature ID:</b> D302-4		<b>Date:</b> 9/13/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Modoc County, California			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, TK, PF					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to U.S. 395 just north of Likely  <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.26450, -120.50362			
<b>Potential anthropogenic influences on the channel system:</b> U.S. 395 and agriculture adjacent.					
<b>Brief site description:</b> Vegetated ditch in shrublands.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input type="checkbox"/> Mapping on aerial photograph    <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Digitized on computer    <input type="checkbox"/> Other:             </div> </li> </ol>					

### Wentworth Size Classes

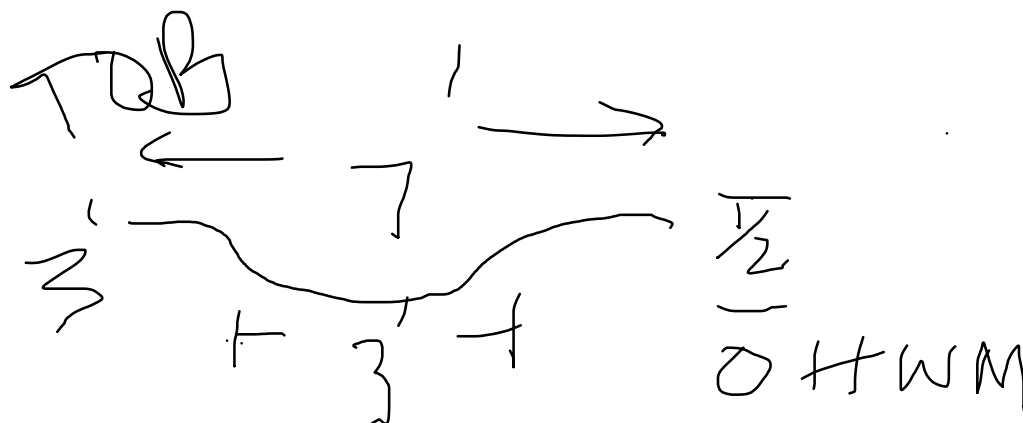
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D302-4

Cross section ID:

Date: 9/13/2019 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☐ Change in vegetation cover☒ Break in bank slope☒ Other: Drift deposits☒ Other: Soil cracks**Comments:**

Constructed bed and bank feature. OHWM evidenced by change in sediment texture, break in bank slope, drift deposits, and soil cracks. Sampling point documents a vegetated ditch.

**Floodplain unit:**☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Raised section with Phalaris only.



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/27/2019

Applicant/Owner: Zayo Group State: California Sampling Point: SP 04-4 Feature ID: W01-4

Investigator(s): MO, KD Section, Township, Range: 8, T39N, R13E

Local relief (hillside, terrace, etc.): Roadside depression Local Relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR): D Lat: 41.2338 Long: -120.50388 Datum: NAD83

Soil Map Unit Name: (152) Lakeview loam, 0 to 2 percent slopes, Pit River area, mlra 21 NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No     

Hydric Soil Present? Yes x No     

Wetland Hydrology Present? Yes x No     

Is the Sampled Area within a Wetland? Yes x No     

## Evaluation of features designated "Other Waters"

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

Remarks: Wetland parameters are present as indicated by hydrology indicator (water stained leaves) and a dominance of hydrophytic vegetation. Soils are problematic likely due to the nearby agricultural influences; it is also likely that soil has had recent movement. See soil remarks.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev. Species Name Absolute Dominant Indicator  
Tree Stratum (Plot size: 30' radius) % Cover Species? Status

1                           
2                           
3                           
4                           
0 = Total Cover

Sapling/Shrub Stratum (Plot size: 15' radius)  
1                           
2                           
3                           
4                           
5                           
0 = Total Cover

Herb Stratum (Plot size: 5' radius)  
1 Alopra Alopecurus pratensis 60 YES FACW  
2 Phaaru Phalaris arundinacea 35 YES FACW  
3 Rumcri Rumex crispus 5 NO FAC  
4                           
5                           
6                           
7                           
8                           
9                           
10                           
11                           
100 = Total Cover

Woody Vine Stratum (Plot size:     )  
1                           
2                           
0 = Total Cover

% Bare Ground in Herb 0 % Cover of Biotic     

## Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant  
Species Across All Strata: 2 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 1 (A/B)

## Prevalence Index worksheet:

Total % Cover of: Multiply by:  
OBL species 0 x 1 = 0  
FACW species 95 x 2 = 190  
FAC species 5 x 3 = 15  
FACU species 0 x 4 = 0  
UPL species 0 x 5 = 0  
Column Totals: 100 (A) 205 (B)  
Prevalence Index = B/A = 2.05

## Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
5 - Wetland Non-Vascular Plants<sup>1</sup>  
6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## Hydrophytic Vegetation Present?

Yes X No     

Remarks: Hydrophytic vegetation present as indicated by a dominance of FACW species.

[illegible]

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/27/2019

Applicant/Owner: Zayo Group State: California Sampling Point: SP 05-4 Feature ID: U01-4

Investigator(s): MO, KD Section, Township, Range: 8, T39N, R13E

Local relief (hillside, terrace, etc.): Roadside slope Local Relief (concave, convex, none): Convex Slope (%): 1

Subregion (LRR): D Lat: 41.23381 Long: -120.5039 Datum: NAD83

Soil Map Unit Name: (152) Lakeview loam, 0 to 2 percent slopes, Pit River area, mlra 21 NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No X

Hydric Soil Present? Yes      No X

Wetland Hydrology Present? Yes      No X

Is the Sampled Area within a Wetland? Yes      No X

## Evaluation of features designated "Other Waters"

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

Remarks: Sample point lacks all indicators of wetland parameters. Upland pair point to W01-4.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev. Species Name Absolute Dominant Indicator  
Tree Stratum (Plot size: 30' radius) % Cover Species? Status

1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)

1	Erinau	Ericameria nauseosa	20	YES	UPL
2					
3					
4					
5					
		20	= Total Cover		

Herb Stratum (Plot size: 5' radius)

1	Lacser	Lactuca serriola	35	YES	FACU
2	Brohor	Bromus hordeaceus	25	YES	FACU
3					
4					
5					
6					
7					
8					
9					
10					
11					
		60	= Total Cover		

Woody Vine Stratum (Plot size:     )

1				
2				
		0	= Total Cover	

% Bare Ground in Herb 40 % Cover of Biotic     

## Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant  
Species Across All Strata: 3 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	60	x 4 = 240
UPL species	20	x 5 = 100
Column Totals:	80	(A) 340 (B)
Prevalence Index = B/A =		4.25

## Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- No 2 - Dominance Test is >50%
- No 3 - Prevalence Index is  $\leq 3.0$ <sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants<sup>1</sup>
- 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## Hydrophytic Vegetation Present?

Yes      No X

Remarks: Sample point dominated by UPL and FACU vegetation.

SOIL							Sampling Point:	
SP 05-4								
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-9	7.5YR 4/3	100					Sandy loam	Roadfill throughout
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.								<sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)								
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/>		<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/>		<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/>		<input type="checkbox"/> Loamy Mucky Mineral (F1)		<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/>		<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Reduced Vertic (F18)			
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )	<input type="checkbox"/>		<input type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Red Parent Material (TF2)			
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )	<input type="checkbox"/>		<input type="checkbox"/> Redox Dark Surface (F6)		<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/>		<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/>		<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/>		<input type="checkbox"/> Vernal Pools (F9)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.			
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/>							
<b>Restrictive Layer (if present):</b>					<b>Hydric Soil Present?</b>			
Type: Compact roadbase gravel					Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Depth (inches): 8								
<b>Remarks:</b> Soil point lacks hydric soil indicators, roadside sample point adjacent to wetland boundary with roadfill in sample point.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>			
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/>		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/>		<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/>		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/>		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/>		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/>		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/>		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/>		<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Depth (inches): _____		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Depth (inches): _____					
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (includes capillary fringe)			Depth (inches): _____					
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/27/2019

Applicant/Owner: Zayo Group State: California Sampling Point: SP 09-4 Feature ID: W03-4b

Investigator(s): MO, KD Section, Township, Range: 5, T39N, R13E

Local relief (hillside, terrace, etc.): Roadside depression Local Relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR): D Lat: 41.2401 Long: -120.50403 Datum: NAD83

Soil Map Unit Name: (112) Buntingville clay loam, 0 to 2 percent slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No     

Hydric Soil Present? Yes x No     

Wetland Hydrology Present? Yes x No     

Is the Sampled Area within a Wetland? Yes x No     

## Evaluation of features designated "Other Waters"

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

Remarks: Wetland hydrology indicators present and vegetation dominated by hydrophytic species. Soils problematic and assumed hydric.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev. Species Name Absolute Dominant Indicator  
Tree Stratum (Plot size: 30' radius) % Cover Species? Status

1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)

1	Salexi	Salix exigua	70	YES	FACW
2					
3					
4					
5					
		70	= Total Cover		

Herb Stratum (Plot size: 5' radius)

1	Typlat	Typha latifolia	30	YES	OBL
2	Schacu	Schoenoplectus acutus	60	YES	OBL
3					
4					
5					
6					
7					
8					
9					
10					
11					
		90	= Total Cover		

Woody Vine Stratum (Plot size:     )

1				
2				
		0	= Total Cover	

% Bare Ground in Herb 10 % Cover of Biotic     

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

## Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	90	x 1 = 90
FACW species	70	x 2 = 140
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	160	(A) 230 (B)
Prevalence Index = B/A =		1.4375

## Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- Yes 2 - Dominance Test is >50%
- Yes 3 - Prevalence Index is  $\leq 3.0$ <sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants<sup>1</sup>
- 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## Hydrophytic Vegetation Present?

Yes X No     

Remarks: Hydrophytic vegetation present as indicated by a dominance of FACW and OBL species.

SOIL							Sampling Point: SP 09-4					
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>												
Depth (inches)	Matrix		Redox Features				Texture	Remarks				
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>						
0-11	10YR 2/2	100					Loam					
11-16	2.5Y 2.5/1	80										
11-16	2.5Y 3/2	18	2.5Y 5/4	2	C	M	Clay					
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.												
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>												
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input checked="" type="checkbox"/> Other (Explain in Remarks)						
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.												
<b>Restrictive Layer (if present):</b>					<b>Hydric Soil Present?</b>							
Type: <u>None</u> Depth (inches): <u>None</u>					Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>							
<b>Remarks:</b> Soils problematic, likely due to volcanic parent material. Soils assumed hydric based on OBL and FACW dominant species and strong hydrology indicators.												
<b>HYDROLOGY</b>												
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>							
<b>Primary Indicators (minimum of one required; check all that apply)</b> <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9)					<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)				<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>							
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)					Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>							
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>												
<b>Remarks:</b> Hydrology indicator present as evidenced by surface water, high water table, saturation, and water-stained leaves.												

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/26/2019

Applicant/Owner: Zayo Group State: California Sampling Point: SP 10-4 Feature ID: U03-4

Investigator(s): MO, KD Section, Township, Range: 5, T39N, R13E

Local relief (hillside, terrace, etc.): Roadside slope Local Relief (concave, convex, none): Convex Slope (%): 1

Subregion (LRR): D Lat: 41.2401 Long: -120.50403 Datum: NAD83

Soil Map Unit Name: (112) Buntingville clay loam, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x

Hydric Soil Present? Yes      No x

Wetland Hydrology Present? Yes      No x

Is the Sampled Area within a Wetland? Yes      No x

## Evaluation of features designated "Other Waters"

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

Remarks: Sample point lacks all indicators of wetland parameters. Upland pair point to W03-4b.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev. Species Name Absolute Dominant Indicator  
Tree Stratum (Plot size: 30' radius) % Cover Species? Status

1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)

1	Erinau	Ericameria nauseosa	5	YES	UPL
2					
3					
4					
5					
		5	= Total Cover		

Herb Stratum (Plot size: 5' radius)

1	Brotec	Bromus tectorum	50	YES	UPL
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
		50	= Total Cover		

Woody Vine Stratum (Plot size:     )

1				
2				
		0	= Total Cover	

% Bare Ground in Herb 50 % Cover of Biotic     

## Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant  
Species Across All Strata: 2 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>55</u>	x 5 = <u>275</u>
Column Totals: <u>55</u> (A)	<u>275</u> (B)
Prevalence Index = B/A = <u>5</u>	

## Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- No 2 - Dominance Test is >50%
- No 3 - Prevalence Index is ≤3.0<sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants<sup>1</sup>
- 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## Hydrophytic Vegetation Present?

Yes      No X

Remarks: Sample point dominated by UPL vegetation.



SOIL							Sampling Point: SP 10-4	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	7.5YR 4/3	100					Sandy loam	Roadfill throughout
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)					
<input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Stripped Matrix (S6)								
<input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Loamy Mucky Mineral (F1)								
<input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Gleyed Matrix (F2)								
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> Depleted Matrix (F3)								
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Redox Dark Surface (F6)								
<input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Depleted Dark Surface (F7)								
<input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Redox Depressions (F8)								
<input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Vernal Pools (F9)								
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b> Type: <u>Compact roadbase fill.</u> Depth (inches): <u>6</u>							<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
<b>Remarks:</b> Upland pair point to W03-4b. Soil point lacks hydric soil indicators, roadside sample point just outside wetland boundary with roadfill in sample point.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b> Surface Water Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </u> Water Table Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </u> Saturation Present?        Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </u> (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Madeline/Lassen Co Sampling Point: 202-4 Feature ID: W200-4  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/27/2019  
 Investigator(s): Mike Williams/Justin Ahn Section, Township, Range: 34, T38N, R13E  
 Local relief (hillside, terrace, etc.): Hillslope Local Relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): D Lat: 41.0789 Long: -120.46901 Datum: NAD 83  
 Soil Map Unit Name: (178) Devada-Peterscreek-Fiddler association 2 to 30 percent slopes NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: Sample point documents a wetland. All three wetland indicators satisfied. Groundwater connection observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius )				
1				
2				
3				
4				
		0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius )				
1				
2				
3				
4				
5				
		0	= Total Cover	
Herb Stratum (Plot size: 5' radius )				
1	Caraqu	Carex aquatilis	40	YES OBL
2	leytri	Leymus triticoides	60	YES FAC
3				
4				
5				
6				
7				
8				
9				
10				
11				
		100	= Total Cover	
Woody Vine Stratum (Plot size: )				
1				
2				
		0	= Total Cover	

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant  
Species Across All Strata: 2 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>40</u>	x 1 = <u>40</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>60</u>	x 3 = <u>180</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>220</u> (B)
Prevalence Index = B/A = <u>2.2</u>	

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation  
Present?

Yes X No     

Remarks: Site is dominated by hydrophytic vegetation .

SOIL							Sampling Point: 202-4	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR 3/2	100					Clay loam	
5-16	10YR 2/2	90	5YR 3/4	10	C	M	Clay	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Soils perched on a clay layer. Indicators of hydric soils observed at the site. Positive test for Fe++ using dipyrindyl strip.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): 14						
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): 12				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Indicator for wetland hydrology observed at site - groundwater observed in open spring at 14 inches within wetland area.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Madeline/Lassen Co Sampling Point: 203-4 Feature ID: U200-4  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/27/2019  
 Investigator(s): Mike Williams/Justin Ahn Section, Township, Range: 34, T38N, R13E  
 Local relief (hillside, terrace, etc.): Hill slope Local Relief (concave, convex, none): Convex Slope (%): 1  
 Subregion (LRR): D Lat: 41.07897 Long: -120.46898 Datum: NAD 83  
 Soil Map Unit Name: (178) Devada-Peterscreek-Fiddler association 2 to 30 percent slopes NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: No wetland indicators present. Sample point upland pair point to W200-4.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1 <u>Junocci</u>	<u>Juniperus occidentalis</u>	<u>30</u>	<u>YES</u>	<u>UPL</u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>30</u> = Total Cover		

Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1 <u>Erinau</u>	<u>Ericameria nauseosa</u>	<u>20</u>	<u>YES</u>	<u>UPL</u>
2 <u>Arttri</u>	<u>Artemisia tridentata</u>	<u>10</u>	<u>YES</u>	<u>UPL</u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
5 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>30</u> = Total Cover		

Herb Stratum (Plot size: <u>1 m x 1 m</u> )				
1 <u>Poacus</u>	<u>Poa cusickii</u>	<u>80</u>	<u>YES</u>	<u>UPL</u>
2 <u>ELYPON</u>	<u>Elymus ponticus</u>	<u>10</u>	<u>NO</u>	<u>UPL</u>
3 <u>Luparg</u>	<u>Lupinus argenteus</u>	<u>5</u>	<u>NO</u>	<u>UPL</u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
5 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
6 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
7 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
8 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
9 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
10 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
11 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>95</u> = Total Cover		

Woody Vine Stratum (Plot size: <u>    </u> )				
1 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u> = Total Cover		

%Bare Ground in Herb Stratum: 5 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>155</u>	x 5 = <u>775</u>
Column Totals: <u>155</u> (A)	<u>775</u> (B)
Prevalence Index = B/A = <u>5</u>	

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0<sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants<sup>1</sup>
- 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes      No X

Remarks: Area was dominated by upland vegetation.

SOIL		Sampling Point: 203-4				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
0-3	10YR 3/2	100			Silt clay	
3-16	10YR 2/2	100			Clay	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.				<sup>4</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						
<input type="checkbox"/> Histosol (A1)		<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Stripped Matrix (S6)				
<input type="checkbox"/> Black Histic (A3)		<input type="checkbox"/> Loamy Mucky Mineral (F1)				
<input type="checkbox"/> Hydrogen Sulfide (A4)		<input type="checkbox"/> Loamy Gleyed Matrix (F2)				
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )		<input type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )		<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)		<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Thick Dark Surface (A12)		<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)		<input type="checkbox"/> Vernal Pools (F9)				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)						
<b>Restrictive Layer (if present):</b>				<b>Hydric Soil Present?</b>		
Type: _____ Depth (inches): _____				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> No indicators of hydric soils were observed						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)						
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>				<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____				
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____ (includes capillary fringe)				
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> Wetland hydrology indicators were not observed.						

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Madeline/Lassen Co Sampling Point: 207-4 Feature ID: W201-4  
Applicant/Owner: Zayo Group State: California Sampling Date: 8/28/2019  
Investigator(s): Mike Williams/Justin Ahn Section, Township, Range: 28, T38N, R13E  
Local relief (hillside, terrace, etc.): Hillslope Local Relief (concave, convex, none): Concave Slope (%): 1  
Subregion (LRR): D Lat: 41.10563 Long: -120.47841 Datum: NAD 83  
Soil Map Unit Name: (334) Ravendale silty clay, 0 to 2 percent slopes, occasionally flooded NWI classification: None  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
Are Vegetation No, Soil No, or Hydrology NO significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
Hydric Soil Present? Yes x No       
Wetland Hydrology Present? Yes x No       
Is the Sampled Area within a Wetland? Yes x No     

Remarks: Sample point documents a wetland. All three wetland indicators satisfied.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: <u>30' radius</u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15' radius</u> )				
1				
2				
3				
4				
5				
		<u>0</u>	= Total Cover	
<b>Herb Stratum</b> (Plot size: <u>5' radius</u> )				
1	<u>Alopra</u>	<u>60</u>	<u>YES</u>	<u>FACW</u>
2	<u>Junbal</u>	<u>30</u>	<u>YES</u>	<u>FACW</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>90</u>	= Total Cover	
<b>Woody Vine Stratum</b> (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 10 % Cover of Biotic Crust: 5

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of: Multiply by:  
OBL species 0 x 1 = 0  
FACW species 90 x 2 = 180  
FAC species 0 x 3 = 0  
FACU species 0 x 4 = 0  
UPL species 0 x 5 = 0  
Column Totals: 90 (A) 180 (B)  
Prevalence Index = B/A = 2

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Site is dominated by hydrophytic vegetation (FACW).

SOIL							Sampling Point: 207-4	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-1	10YR 3/2	100					Loam	Dense root layer
5-16	10YR 2/2	95	5YR 3/4	5	C	PL	Clay	Prominent redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Soils consist of dense clay - Indicators of hydric soils observed: Redox Dark Surface.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input checked="" type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input checked="" type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Indicators for wetland hydrology observed at site.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Madeline/Lassen Co Sampling Point: 208-4 Feature ID: U201-4  
Applicant/Owner: Zayo Group State: California Sampling Date: 8/28/2019  
Investigator(s): Mike Williams/Justin Ahn Section, Township, Range: 28, T38N, R13E  
Local relief (hillside, terrace, etc.): Hill slope Local Relief (concave, convex, none): Convex Slope (%): 1  
Subregion (LRR): D Lat: 41.10562 Long: -120.47848 Datum: NAD 83  
Soil Map Unit Name: (334) Ravendale silty clay, 0 to 2 percent slopes, occasionally flooded NWI classification: None  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x  
Hydric Soil Present? Yes      No x  
Wetland Hydrology Present? Yes      No x  
Is the Sampled Area within a Wetland? Yes      No x

Remarks: No wetland indicators present

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30</u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

Sapling/Shrub Stratum (Plot size: <u>15</u> )				
1 <u>Erinau</u>	<u>Ericameria nauseosa</u>	<u>5</u>	<u>YES</u>	<u>UPL</u>
2 <u>Arttri</u>	<u>Artemisia tridentata</u>	<u>15</u>	<u>YES</u>	<u>UPL</u>
3				
4				
5				
		<u>20</u>		= Total Cover

Herb Stratum (Plot size: <u>5</u> )				
1 <u>Leycin</u>	<u>Leymus cinereus</u>	<u>25</u>	<u>YES</u>	<u>FAC</u>
2 <u>Brotec</u>	<u>Bromus tectorum</u>	<u>20</u>	<u>YES</u>	<u>UPL</u>
3 <u>Tradub</u>	<u>Traigopogon dubious</u>	<u>5</u>	<u>NO</u>	<u>UPL</u>
4				
5				
6				
7				
8				
9				
10				
11				
		<u>50</u>		= Total Cover

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 50 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>25</u>	x 3 = <u>75</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>45</u>	x 5 = <u>225</u>
Column Totals: <u>70</u> (A)	<u>300</u> (B)
Prevalence Index = B/A = <u>4.2857</u>	

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0<sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants<sup>1</sup>
- 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes      No X

Remarks: Area was dominated by upland vegetation (UPL and FACU).



SOIL		Sampling Point: 208-4				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.				<sup>4</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)					
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)					
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )	<input type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )	<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)						
<b>Restrictive Layer (if present):</b>					<b>Hydric Soil Present?</b>	
Type: <u>Compacted roadfill rock</u> Depth (inches): <u>0</u>					Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
<b>Remarks:</b> Compacted gravel road fill - no soil profile. Soils assumed non-hydric.						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>	
Primary Indicators (minimum of one required; check all that apply)						
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>	
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)					Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> No surface wetland hydrology indicators were observed. Subsurface indicators presumed absent.						

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Madeline/Lassen Co Sampling Point: 215-4 Feature ID: W203-4  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/28/2019  
 Investigator(s): Mike Williams/Justin Ahn Section, Township, Range: 17, T38N, R13E  
 Local relief (hillside, terrace, etc.): Hillslope Local Relief (concave, convex, none): Concave Slope (%): 3  
 Subregion (LRR): D Lat: 41.12542 Long: -120.49402 Datum: NAD 83  
 Soil Map Unit Name: (178) Devada Petescreek-Fiddler association, 2 to 30 percent slopes NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No       
 Is the Sampled Area within a Wetland? Yes x No     

Remarks: Sample point documents a wetland. Hydrophytic vegetation dominant. Indicators of hydric soils and hydrology present. Strong groundwater presence at site.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30</u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: <u>15</u> )				
1				
2				
3				
4				
5				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>5</u> )				
1	<u>Caraqu Carex aquatilis</u>	<u>55</u>	<u>YES</u>	<u>OBL</u>
2	<u>Junbal Juncus balticus</u>	<u>25</u>	<u>YES</u>	<u>FACW</u>
3	<u>Collin Collomia linearis</u>	<u>2</u>	<u>NO</u>	<u>FACU</u>
4				
5				
6				
7				
8				
9				
10				
11				
		<u>82</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 10 % Cover of Biotic Crust: 8

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>55</u>	x 1 =	<u>55</u>
FACW species <u>25</u>	x 2 =	<u>50</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>2</u>	x 4 =	<u>8</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>82</u> (A)		<u>113</u> (B)
Prevalence Index = B/A = <u>1.378</u>		

## Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Site is dominated by hydrophytic vegetation (OBL and FACW).

SOIL		Sampling Point: 215-4						
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR 2/1	100					Silt clay	Dense root layer
5-16	10YR 2/1	70	5YR 3/4	30	C	M	Clay	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>					
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )					
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )					
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Reduced Vertic (F18)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )	<input type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Red Parent Material (TF2)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )	<input checked="" type="checkbox"/> Redox Dark Surface (F6)		<input type="checkbox"/> Other (Explain in Remarks)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b>				<b>Hydric Soil Present?</b>				
Type: _____				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Depth (inches): _____								
<b>Remarks:</b> Indicators of hydric soils observed at the site. Soils test positive throughout ped for Fe++ using dipyrldyl strip								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>				
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )					
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )					
<input checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )					
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)					
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)					
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)					
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)					
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)					
<b>Field Observations:</b>				<b>Wetland Hydrology Present?</b>				
Surface Water Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches): 6	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Water Table Present?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Depth (inches): At surface					
Saturation Present?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Depth (inches): At surface					
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Indicators for wetland hydrology observed at site. Water flowing through wetland area.								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Madeline/Lassen Co Sampling Point: 216-4 Feature ID: U203-4  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/28/2019  
 Investigator(s): Mike Williams/Justin Ahn Section, Township, Range: 17, T38N, R13E  
 Local relief (hillside, terrace, etc.): Hill slope Local Relief (concave, convex, none): Convex Slope (%): 1  
 Subregion (LRR): D Lat: 41.12539 Long: -120.49405 Datum: NAD 83  
 Soil Map Unit Name: (178) Devada Petescreek - Fiddler association 2 to 30 percent slopes NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x  
 Hydric Soil Present? Yes      No x  
 Wetland Hydrology Present? Yes      No x  
 Is the Sampled Area within a Wetland? Yes      No x

Remarks: No wetland indicators present. Sample point upland pair to W203-4.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)				
1				
2				
3				
4				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: 15' radius)				
1	Erinau <i>Ericameria nauseosa</i>	5	NO	UPL
2	Arttri <i>Artemisia tridentata</i>	25	YES	UPL
3				
4				
5				
		30	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5' radius)				
1	Leytri <i>Leymus triticoides</i>	30	YES	FAC
2	Censto <i>Centaurea stoebe</i>	10	NO	UPL
3	Tradub <i>Traigopogon dubious</i>	10	NO	UPL
4	Lacser <i>Lactuca serriola</i>	15	YES	FACU
5				
6				
7				
8				
9				
10				
11				
		65	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: 5' radius)				
1				
2				
		0	= Total Cover	

%Bare Ground in Herb Stratum: 45 % Cover of Biotic Crust:     

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	0 x 1 =	0
FACW species	0 x 2 =	0
FAC species	30 x 3 =	90
FACU species	15 x 4 =	60
UPL species	50 x 5 =	250
Column Totals:	95 (A)	400 (B)
Prevalence Index = B/A =		4.2105

## Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
  - 2 - Dominance Test is >50%
  - 3 - Prevalence Index is  $\leq 3.0^1$
  - 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
  - 5 - Wetland Non-Vascular Plants<sup>1</sup>
  - 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Area was dominated by upland vegetation (UPL and FACU).

<b>SOIL</b>		Sampling Point: 216-4				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.				<sup>4</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)					
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)					
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )	<input type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )	<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)						
<b>Restrictive Layer (if present):</b>				<b>Hydric Soil Present?</b>		
Type: <u>Copmact roadfill rock</u> Depth (inches): <u>0</u>				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Compacted gravel road fill - no soil profile						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)						
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>				<b>Wetland Hydrology Present?</b>		
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <u>          </u>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <u>          </u>			
Saturation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <u>          </u>			
(includes capillary fringe)						
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> No surface wetland hydrology indicators were observed. Subsurface indicators assumed absent.						

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Modoc County Sampling Date: 8/26/2019

Applicant/Owner: Zayo Group State: California Sampling Point: SP 01-4 Feature ID: NW01-4

Investigator(s): MO, KD Section, Township, Range: 17, T40N, R13E

Local relief (hillside, terrace, etc.): Depression/Roadside Swale Local Relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR): D Lat: 41.29812 Long: -120.50459 Datum: NAD83

Soil Map Unit Name: (132) Deven-Rock Outcrop Complex, 2 to 30 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x

Hydric Soil Present? Yes      No x

Wetland Hydrology Present? Yes x No     

Is the Sampled Area within a Wetland? Yes      No x

## Evaluation of features designated "Other Waters"

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

**Remarks:** Non-wetland sample point as indicated by the presence of hydrology indicators (biotic crust and drainage patterns), but lacks hydric soil indicators and lacks a dominance of hydrophytic vegetation. While it appears that the area is inundated by water periodically, it lacks indicators to evidence that it is a wetland or other waters.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30' radius</u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

Sapling/Shrub Stratum (Plot size: <u>15' radius</u> )				
1				
2				
3				
4				
5				
		<u>0</u>		= Total Cover

Herb Stratum (Plot size: <u>5' radius</u> )				
1	<u>Rumex</u>	<u>Rumex crispus</u>	<u>10</u>	<u>YES</u> <u>FAC</u>
2	<u>Helann</u>	<u>Helianthus annuus</u>	<u>10</u>	<u>YES</u> <u>FACU</u>
3	<u>Lacser</u>	<u>Lactuca serriola</u>	<u>5</u>	<u>NO</u> <u>FACU</u>
4	<u>Croset</u>	<u>Croton setiger</u>	<u>5</u>	<u>NO</u> <u>UPL</u>
5				
6				
7				
8				
9				
10				
11				
			<u>30</u>	= Total Cover

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
			<u>0</u>	= Total Cover

% Bare Ground in Herb 70 % Cover of Biotic     

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.5 (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>10</u>	x 3 =	<u>30</u>
FACU species <u>15</u>	x 4 =	<u>60</u>
UPL species <u>5</u>	x 5 =	<u>25</u>
Column Totals: <u>30</u>	(A)	<u>115</u> (B)
Prevalence Index = B/A = <u>3.8333</u>		

## Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- No 2 - Dominance Test is >50%
- No 3 - Prevalence Index is  $\leq 3.0$ <sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants<sup>1</sup>
- 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## Hydrophytic Vegetation Present?

Yes      No X

**Remarks:** Hydrophytic vegetation not dominant as indicated by a dominance of FACU and FAC species.

[illegible]

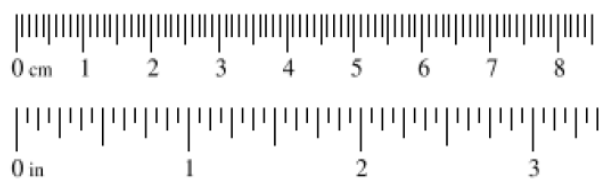
### Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> <u>SP 100-5</u>		<b>Feature ID:</b> <u>D100-5</u>		<b>Date:</b> <u>8/14/2019</u>	
<b>Project:</b> <u>Zayo Fiberoptic Interconnect Project</u>					
<b>Location:</b> <u>Lassen County</u>			<b>Photo begin/end file#:</b> <u>See Field Photos</u>		
<b>Investigator(s):</b> <u>SF/ ZB</u>					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> <u>Along Highway 395</u> <b>Projection:</b> <u>Lambert</u> <b>Datum:</b> <u>NAD83</u> <b>Coordinates:</b> <u>40.85621, -120.44613</u>			
<b>Potential anthropogenic influences on the channel system:</b> <u>Highway, agricultural lands</u>					
<b>Brief site description:</b> <u>More channelized to the east, braided channels as it gets closer to C100-5, soil cracks present throughout.</u>					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> <u>ESRI GIS imagery</u>  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <input type="checkbox"/> Mapping on aerial photograph    <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Digitized on computer    <input type="checkbox"/> Other: _____ </div> </li> </ol>					



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D100-5

Cross section ID:

Date:

Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☐ Break in bank slope☒ Other: Surface soil cracks☐ Other: \_\_\_\_\_**Comments:**

Two OHWM indicators present, change in vegetation cover and slight change in sediment texture, surface soil cracks throughout. Sampling point documents an ephemeral stream.

**Floodplain unit:**☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

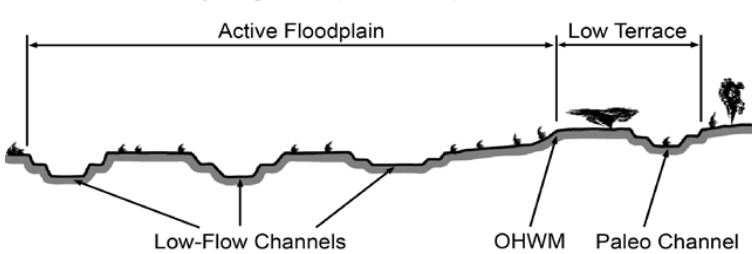
Community successional stage:

☒ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☐ Soil development☒ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# **Arid West Ephemeral and Intermittent Streams OHWM Datasheet**

<b>Sampling Point:</b> <u>SP 203-5</u>		<b>Feature ID:</b> <u>D200-5a</u>		<b>Date:</b> <u>8/15/2019</u>	
<b>Project:</b> <u>Zayo Fiberoptic Interconnect Project</u>					
<b>Location:</b> <u>Lassen County, CA</u>			<b>Photo begin/end file#:</b> <u>See Field Photos</u>		
<b>Investigator(s):</b> <u>LH/ CG</u>					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> <u>Along Highway 395</u> <b>Projection:</b> <u>Lambert</u> <b>Datum:</b> <u>NAD83</u> <b>Coordinates:</b> <u>41.02063, -120.48767</u>		
<b>Potential anthropogenic influences on the channel system:</b> <u>Artificially irrigated and adjacent roadways.</u>					
<b>Brief site description:</b> <u>Temporarily flooded irrigation ditch that runs towards and then alongside of highway; site visit occurred when water was being released through ditch for potential agricultural use nearby.</u>					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> <u>ESRI GIS imagery</u>  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div style="text-align: center;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

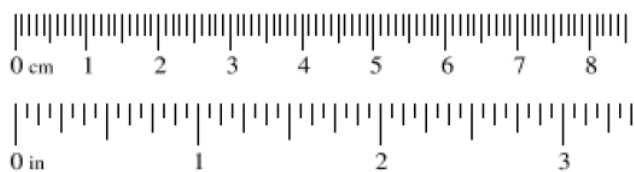
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud

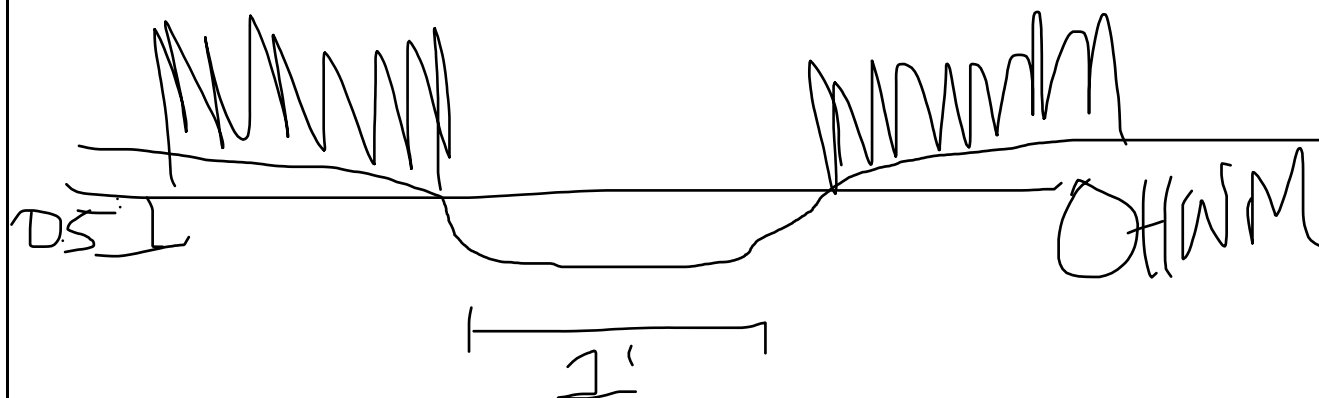


Feature ID: D200-5a

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Change in sediment texture observed above OHWM from developed soil horizons and 90% silt, 10% sand to 70% silt and 30% cobbles below OHWM. Change in vegetation cover: above OHWM 100% herbaceous cover was observed, 0% vegetation cover below. Gentle break in slope observed at OHWM.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: silty clayTotal veg cover: 4 % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: 4 %

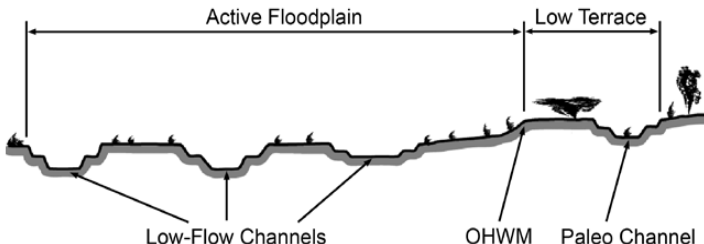
Community successional stage:

☐ NA☒ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☒ Soil development☒ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> <u>SP 502-5</u>		<b>Feature ID:</b> <u>D500-5</u>		<b>Date:</b> <u>8/27/2019</u>	
<b>Project:</b> <u>Zayo Fiberoptic Interconnect Project</u>					
<b>Location:</b> <u>Lessen Co, CA</u>			<b>Photo begin/end file#:</b> <u>See Field Photos</u>		
<b>Investigator(s):</b> <u>MW/ JA</u>					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to US 395 <b>Projection:</b> <u>Lambert</u> <b>Datum:</b> <u>NAD83</u> <b>Coordinates:</b> <u>41.05307, -120.47437</u>			
<b>Potential anthropogenic influences on the channel system:</b> Channelization due to farming					
<b>Brief site description:</b> Channelized stream in ag and low density residential area					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> <u>ESRI GIS imagery</u>  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input type="checkbox"/> Mapping on aerial photograph    <input type="checkbox"/> GPS  <input type="checkbox"/> Digitized on computer            <input type="checkbox"/> Other:         </div>					



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

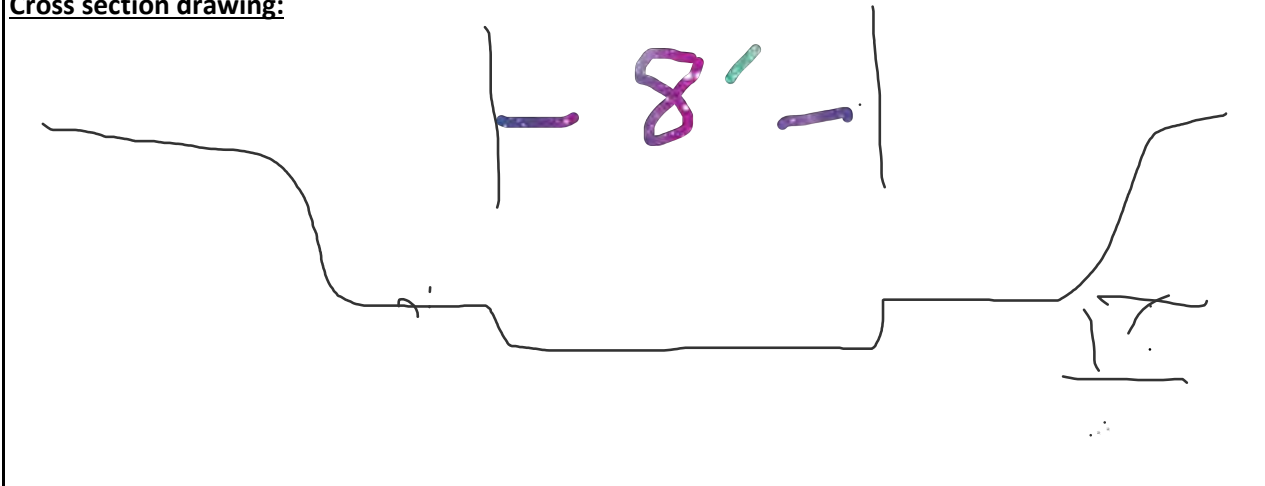


Feature ID: D500-5

Cross section ID:

Date:

Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☒ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: Drift deposits☐ Other: \_\_\_\_\_**Comments:**

Well defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, drift deposits, and changes in vegetation species and cover. Sampling point documents a perennial stream.

**Floodplain unit:**☐ Low-Flow Channel☒ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Silty loamTotal veg cover: 100 % Tree: 0 % Shrub: 0 % Herb: 100 %

Community successional stage:

☐ NA☒ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☒ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Herbaceous dominated floodplain on both banks

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project, Group #5 City/County: Lassen County Sampling Point: SP 50-5 Feature ID: W5-5  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/12/2019  
 Investigator(s): HR/ PF Section, Township, Range: S23, T25N, R13E  
 Local relief (hillside, terrace, etc.): Swale Local Relief (concave, convex, none): Concave Slope (%): 0 to 2  
 Subregion (LRR): D Lat: 41.00208 Long: -120.49274 Datum: NAD83  
 Soil Map Unit Name: (334) Ravendale silty clay, 0 to 2 percent, occasionally flooded NWI classification: PSSA  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

**Remarks:** Wetland parameters evidenced by indicators of hydrophytic vegetation and primary hydrology (surface soil cracks and biotic crust). Soils meet criteria for naturally problematic soils in feature subject to recent inundation.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

<b>Sapling/Shrub Stratum</b> (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>		= Total Cover

<b>Herb Stratum</b> (Plot size: <u>5 ft radius</u> )				
1	<u>Junbal</u>	<u>Juncus balticus</u>	<u>80</u>	<u>YES</u> <u>FACW</u>
2	<u>Rumsal</u>	<u>Rumex salicifolius</u>	<u>10</u>	<u>NO</u> <u>FACW</u>
3	<u>Lepcam</u>	<u>Lepidium campestre</u>	<u>10</u>	<u>NO</u> <u>UPL</u>
4				
5				
6				
7				
8				
9				
10				
11				
			<u>100</u>	= Total Cover

<b>Woody Vine Stratum</b> (Plot size: <u>    </u> )				
1				
2				
			<u>0</u>	= Total Cover

%Bare Ground in Herb Stratum:      % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant  
Species Across All Strata: 1 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>90</u>	x 2 =	<u>180</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>10</u>	x 5 =	<u>50</u>
Column Totals: <u>100</u> (A)		<u>230</u> (B)
Prevalence Index = B/A =		<u>2.3</u>

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic  
Vegetation  
Present?**

Yes X No     

**Remarks:** Hydrophytic vegetation is dominant. Upland species establishing as soil is drying seasonally.

SOIL						Sampling Point: SP 50-5		
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	2.5Y 4/2	100					Clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Vernal Pools (F9) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input checked="" type="checkbox"/> Other (Explain in Remarks)					
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: _____ None Depth (inches): _____ NA						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Soils meet criteria for problematic hydric soil as low chroma may be obscuring redox in developing soils. Site is adjacent to highway and agricultural runoff. Soils appear somewhat depleted. Both hydrophytic vegetation and wetland hydrology indicators are present in the feature which is functioning as a wetland.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input checked="" type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input checked="" type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):		NA	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Water Table Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):		NA			
Saturation Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):		NA			
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Primary wetland hydrology indicators were observed (surface soil cracks, and biotic crust), and one secondary indicator (dominant species pass FAC-neutral test).								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project, Group #5 City/County: Lassen County Sampling Point: SP 51-5 Feature ID: U50-5  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/12/2019  
 Investigator(s): HR/PF Section, Township, Range: S23,T25N,R13E  
 Local relief (hillside, terrace, etc.): Hillslope Local Relief (concave, convex, none): None Slope (%): 3 to 6  
 Subregion (LRR): D Lat: 41.00208 Long: -120.49274 Datum: NAD83  
 Soil Map Unit Name: (334) Ravendale silty clay, 0 to 2 percent, occasionally flooded NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Sample confirmed as upland along slope where indicators of all three parameters are absent; upland pair point to W50-5.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>15 ft radius</u> )				
1	Arttri	Artemisia tridentata	5	YES UPL
2				
3				
4				
5				
		<u>5</u>	= Total Cover	

Herb Stratum (Plot size: <u>5 ft radius</u> )				
1	Fesida	Festuca idahoensis	60	YES FACU
2	Gayram	Gayophytum ramosissimum	5	NO UPL
3	Thiint	Thinopyrum intermedium	5	NO UPL
4	Lacser	Lactuca serriola	5	NO FACU
5	Meloff	Melilotus officinalis	5	NO FACU
6	Medsat	Medicago sativa	5	NO UPL
7				
8				
9				
10				
11				
		<u>85</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum:      % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)  
  
 Total Number of Dominant Species Across All Strata: 2 (B)  
  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>70</u>	x 4 = <u>280</u>
UPL species <u>20</u>	x 5 = <u>100</u>
Column Totals: <u>90</u> (A)	<u>380</u> (B)
Prevalence Index = B/A = <u>4.2222</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes      No X

Remarks: Dominance of hydrophytic vegetation not observed.



# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project, Group #5 City/County: Lassen County, CA Sampling Point: SP 201-5 Feature ID: W200-5a  
 Applicant/Owner: Zayo Group State: Oregon Sampling Date: 8/14/2019  
 Investigator(s): LH/CG Section, Township, Range: S22, T26N, R13E  
 Local relief (hillside, terrace, etc.): Toeslope Local Relief (concave, convex, none): None Slope (%): 1  
 Subregion (LRR): D Lat: 40.97658 Long: -120.49832 Datum: NAD83  
 Soil Map Unit Name: (324) Pit clay, 0 to 2 percent slopes, Hydric NWI classification: PSSA  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic? Yes (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

**Remarks:** Fresh emergent wetland dominated by Carex species, runs parallel to Highway for over 2 miles; strong hydrology indicators observed. Soils meet criteria for problematic hydric soils based on the presence of moderately strong alkaline soils; therefore considered hydric in area subject to frequent inundation.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: <u>Na</u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

<b>Sapling/Shrub Stratum</b> (Plot size: <u>15' radius</u> )				
1				
2				
3				
4				
5				
		<u>0</u>		= Total Cover

<b>Herb Stratum</b> (Plot size: <u>5' radius</u> )				
1	<u>Junbal</u>	<u>Juncus balticus</u>	<u>40</u>	<u>YES</u> <u>FACW</u>
2	<u>Carath</u>	<u>Carex atherodes</u>	<u>50</u>	<u>YES</u> <u>OBL</u>
3	<u>Phlpra</u>	<u>Phleum pratense</u>	<u>10</u>	<u>NO</u> <u>FACU</u>
4				
5				
6				
7				
8				
9				
10				
11				
			<u>100</u>	= Total Cover

<b>Woody Vine Stratum</b> (Plot size: <u>Na</u> )				
1				
2				
			<u>0</u>	= Total Cover

%Bare Ground in Herb Stratum:      % Cover of Biotic Crust: 10

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant  
Species Across All Strata: 2 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>50</u>	x 1 =	<u>50</u>
FACW species <u>40</u>	x 2 =	<u>80</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>10</u>	x 4 =	<u>40</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>100</u> (A)		<u>170</u> (B)
Prevalence Index = B/A =		<u>1.7</u>

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic  
Vegetation  
Present?**

Yes X No     

**Remarks:** Sample contains a dominance of hydrophytic vegetation.



SOIL		Sampling Point: SP 201-5				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
0-1	Organic					Organic layer
1-7	10YR 4/1	100			Clay	
7-16	2.5Y 3/1	100			Clay	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.						
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>				
<input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )				
<input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Loamy Mucky Mineral (F1)		<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )				
<input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Reduced Vertic (F18)				
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Red Parent Material (TF2)				
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Redox Dark Surface (F6)		<input checked="" type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Depleted Dark Surface (F7)						
<input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Redox Depressions (F8)						
<input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Vernal Pools (F9)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)						
<b>Restrictive Layer (if present):</b>				<b>Hydric Soil Present?</b>		
Type: <u>None</u>				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Depth (inches): <u>NA</u>						
<b>Remarks:</b> Hydric soil indicators not observed in sample. Soils are presumed as problematic due to presence of alkaline soils which may inhibit the development of iron or manganese concentrations; soils also have low chroma colors which may obscure redox; strong vegetation and hydrology indicators are present in this feature which functions as a wetland.						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>			<b>Secondary Indicators (2 or more required)</b>			
<b>Primary Indicators (minimum of one required; check all that apply)</b>						
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input checked="" type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input checked="" type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Other (Explain in Remarks)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>				<b>Wetland Hydrology Present?</b>		
Surface Water Present?    Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>0</u>		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Water Table Present?    Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>0</u>				
Saturation Present?    Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>0</u>				
(includes capillary fringe)						
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> Multiple primary and secondary wetland hydrology indicators observed in sample.						

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project, Group #5 City/County: Lassen County Sampling Point: SP 202-5 Feature ID: U200-5  
 Applicant/Owner: Zayo Group State: Oregon Sampling Date: 8/14/2019  
 Investigator(s): LH/CG Section, Township, Range: S22, T26N, R13E  
 Local relief (hillside, terrace, etc.): Hillside Local Relief (concave, convex, none): Convex Slope (%): 8  
 Subregion (LRR): D Lat: 40.97661 Long: -120.49858 Datum: NAD83  
 Soil Map Unit Name: (324) Pit clay, 0 to 2 percent slopes, Hydric NWI classification: NA  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? No (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Sample confirmed as upland along slope where indicators of all three parameters are absent; pair point to W200-5a.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
5 _____	_____	_____	_____	_____
		0	= Total Cover	
Herb Stratum	(Plot size: _____ 5' radius _____)			
1 <u>Lacser</u>	<u>Lactuca serriola</u>	30	YES	FACU
2 <u>Gaydec</u>	<u>Gayophytum decipiens</u>	50	YES	UPL
3 <u>Phlpra</u>	<u>Phleum pratense</u>	20	YES	FACU
4 _____	_____	_____	_____	_____
5 _____	_____	_____	_____	_____
6 _____	_____	_____	_____	_____
7 _____	_____	_____	_____	_____
8 _____	_____	_____	_____	_____
9 _____	_____	_____	_____	_____
10 _____	_____	_____	_____	_____
11 _____	_____	_____	_____	_____
		100	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant  
Species Across All Strata: 3 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>50</u>	x 4 = <u>200</u>
UPL species <u>50</u>	x 5 = <u>250</u>
Column Totals: <u>100</u> (A)	<u>450</u> (B)
Prevalence Index = B/A = <u>4.5</u>	

### Hydrophytic Vegetation Indicators:

No 1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation  
Present?

Yes      No X

Remarks: Sample does not contain a dominance of hydrophytic vegetation.

SOIL							Sampling Point: SP 202-5	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-9	10YR 4/1	100					Clay loam	Gravel throughout; no redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>							<b>Hydric Soil Present?</b>	
Type: rocky road prism								
Depth (inches): 9							Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
<b>Remarks:</b> Hydric soil indicators not observed. Shovel refusal at 9 inches due to gravels/rocky road base.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): NA		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): NA						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): NA						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Wetland hydrology indicators not observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project, Group #5 City/County: Lassen County, CA Sampling Point: SP 204-5 Feature ID: W202-5  
 Applicant/Owner: Zayo Group State: Oregon Sampling Date: 8/14/2019  
 Investigator(s): LH/CG Section, Township, Range: S21, T37N, R13E  
 Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 3  
 Subregion (LRR): D Lat: 41.03294 Long: -120.48344 Datum: NAD83  
 Soil Map Unit Name: (334) Ravendale silty clay, 0 to 2 percent slopes, occasionally flooded NWI classification: PEM1Fx  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic? Yes (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

**Remarks:** Fresh emergent wetland dominated by Juncus and Rumex species in the herb layer; strong hydrology indicators observed. Soils meet criteria for problematic hydric soils based on the presence of moderately strong alkaline soils; therefore considered hydric in area subject to frequent inundation. Feature appears to be anthropogenically influenced, may serve as irrigation canal for nearby agriculture.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>Na</u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>15' radius</u> )				
1	<u>Arttri</u>	<u>Artemisia tridentata</u>	<u>5</u>	<u>YES</u>
2				
3				
4				
5				
		<u>5</u>	= Total Cover	

Herb Stratum (Plot size: <u>5' radius</u> )				
1	<u>Junbal</u>	<u>Juncus balticus</u>	<u>40</u>	<u>YES</u>
2	<u>Rumeri</u>	<u>Rumex crispus</u>	<u>30</u>	<u>YES</u>
3	<u>Phlpra</u>	<u>Phleum pratense</u>	<u>5</u>	<u>NO</u>
4				
5				
6				
7				
8				
9				
10				
11				
		<u>75</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>Na</u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 25 % Cover of Biotic Crust: 10

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)  
  
 Total Number of Dominant Species Across All Strata: 3 (B)  
  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>40</u>	x 2 = <u>80</u>
FAC species <u>30</u>	x 3 = <u>90</u>
FACU species <u>5</u>	x 4 = <u>20</u>
UPL species <u>5</u>	x 5 = <u>25</u>
Column Totals: <u>80</u> (A)	<u>215</u> (B)
Prevalence Index = B/A = <u>2.6875</u>	

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

**Remarks:** Sample contains a dominance of hydrophytic vegetation.

SOIL							Sampling Point: SP 204-5	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	Organic							O-layer
3-16	10YR 2.5/3	100					Loamy clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.
<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input checked="" type="checkbox"/> Other (Explain in Remarks)
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<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type:                     None                    

Depth (inches):                     NA

**Hydric Soil Present?**

Yes ☒ No ☐

**Remarks:** Hydric soil indicators not observed in sample. Soils are presumed as problematic hydric soils due to presence of alkaline soils which may inhibit the development of iron or manganese concentrations; soils also have low chroma colors which may obscure redox; strong vegetation and hydrology indicators are present in this feature which functions as a wetland.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

<input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input checked="" type="checkbox"/> Biotic Crust (B12) <input checked="" type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
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Secondary Indicators (2 or more required)

<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )
<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )
<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Shallow Aquitard (D3)
<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches): <u>          0          </u>
Water Table Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches): <u>          0          </u>
Saturation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches): <u>          0          </u>

(includes capillary fringe)

**Wetland Hydrology Present?**

Yes ☒ No ☐

**Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:** Multiple primary and secondary wetland hydrology indicators observed in sample.

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project, Group #5 City/County: Lassen County, CA Sampling Point: SP 205-5 Feature ID: U202-5  
 Applicant/Owner: Zayo Group State: Oregon Sampling Date: 8/15/2019  
 Investigator(s): LH/CG Section, Township, Range: S21, T37N, R13E  
 Local relief (hillside, terrace, etc.): Berm Local Relief (concave, convex, none): None Slope (%): 10  
 Subregion (LRR): D Lat: 41.03297 Long: -120.48339 Datum: NAD83  
 Soil Map Unit Name: NA NWI classification: NA  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? No (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Sample confirmed as upland along slope where indicators of all three parameters; pair point to W202-5.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

Sapling/Shrub Stratum (Plot size: <u>15' radius</u> )				
1 Arttri	Artemisia tridentata	30	YES	UPL
2				
3				
4				
5				
		<u>30</u>		= Total Cover

Herb Stratum (Plot size: <u>5' radius</u> )				
1 Gaydec	Gayophytum decipiens	40	YES	UPL
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>40</u>		= Total Cover

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 60 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>40</u>	x 5 = <u>200</u>
Column Totals: <u>40</u> (A)	<u>200</u> (B)
Prevalence Index = B/A = <u>5</u>	

### Hydrophytic Vegetation Indicators:

- No 1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Sample does not contain a dominance of hydrophytic vegetation.

SOIL							Sampling Point: SP 205-5				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>											
Depth (inches)	Matrix		Redox Features				Texture	Remarks			
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>					
0-16	7.5YR 3/2	100					Loamy clay				
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.				
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>											
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)					
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.											
<b>Restrictive Layer (if present):</b> Type: _____ None Depth (inches): _____ NA						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input type="checkbox"/> X <input checked="" type="checkbox"/>					
<b>Remarks:</b> Hydric soil indicators not observed.											
<b>HYDROLOGY</b>											
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>					
<b>Primary Indicators (minimum of one required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)						<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ NA Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ NA Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ NA (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input type="checkbox"/> X <input checked="" type="checkbox"/>					
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>											
<b>Remarks:</b> Wetland hydrology indicators not observed.											

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project, Group #5 City/County: Lassen County, CA Sampling Point: SP 204-5 Feature ID: W203-5  
 Applicant/Owner: Zayo Group State: Oregon Sampling Date: 8/14/2019  
 Investigator(s): LH/CG Section, Township, Range: S16, T37N, R13E  
 Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 3  
 Subregion (LRR): D Lat: 41.03911 Long: -120.48097 Datum: NAD83  
 Soil Map Unit Name: (334) Ravendale silty clay, 0 to 2 percent slopes, occasionally flooded NWI classification: PEM1Fx  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic? Yes (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

**Remarks:** Fresh emergent wetland dominated by Juncus and Rumex species; strong hydrology indicators observed. Soils meet criteria for problematic hydric soils based on the presence of moderately strong alkaline soils; therefore considered hydric in area subject to frequent inundation. Feature appears to be anthropogenically influenced, may serve as irrigation canal for nearby agriculture.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>Na</u> )				
1				
2				
3				
4				
		<u>0</u>		

Sapling/Shrub Stratum (Plot size: <u>15' radius</u> )				
1	Arttri	Artemisia tridentata	5	YES UPL
2				
3				
4				
5				
		<u>5</u>		

Herb Stratum (Plot size: <u>5' radius</u> )				
1	Junbal	Juncus balticus	40	YES FACW
2	Rumcri	Rumex crispus	30	YES FAC
3	Phlpra	Phleum pratense	5	NO FACU
4				
5				
6				
7				
8				
9				
10				
11				
		<u>75</u>		

Woody Vine Stratum (Plot size: <u>Na</u> )				
1				
2				
		<u>0</u>		

%Bare Ground in Herb Stratum: 25 % Cover of Biotic Crust: 10

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)  
  
 Total Number of Dominant Species Across All Strata: 3 (B)  
  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>40</u>	x 2 =	<u>80</u>
FAC species <u>30</u>	x 3 =	<u>90</u>
FACU species <u>5</u>	x 4 =	<u>20</u>
UPL species <u>5</u>	x 5 =	<u>25</u>
Column Totals: <u>80</u> (A)		<u>215</u> (B)
Prevalence Index = B/A = <u>2.6875</u>		

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation  
Present?

Yes X No     

**Remarks:** Sample contains a dominance of hydrophytic vegetation.



SOIL		Sampling Point: SP 204-5						
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	Organic							O-layer
3-16	10YR 2.5/3	100					Loamy clay	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)								
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)		Indicators for Problematic Hydric Soils <sup>3</sup> :					
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> 1 cm Muck (A9) (LRR C)					
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		<input type="checkbox"/> 2 cm Muck (A10) (LRR B)					
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Reduced Vertic (F18)					
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Red Parent Material (TF2)					
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)		<input checked="" type="checkbox"/> Other (Explain in Remarks)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
Restrictive Layer (if present):					Hydric Soil Present?			
Type: <u>None</u>					Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Depth (inches): <u>NA</u>								
Remarks: Hydric soil indicators not observed in sample. Soils are presumed as problematic hydric soils due to presence of alkaline soils which may inhibit the development of iron or manganese concentrations; soils also have low chroma colors which may obscure redox; strong vegetation and hydrology indicators are present in this feature which functions as a wetland.								
HYDROLOGY								
Wetland Hydrology Indicators:					Secondary Indicators (2 or more required)			
Primary Indicators (minimum of one required; check all that apply)								
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) (Riverine)					
<input checked="" type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) (Riverine)					
<input checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) (Riverine)					
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)					
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input checked="" type="checkbox"/> Dry-Season Water Table (C2)					
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)					
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)					
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)					
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)					
Field Observations:					Wetland Hydrology Present?			
Surface Water Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	<u>0</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Water Table Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	<u>0</u>				
Saturation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	<u>0</u>				
(includes capillary fringe)								
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks: Multiple primary and secondary wetland hydrology indicators observed in sample.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project, Group #5 City/County: Lassen County, CA Sampling Point: SP 205-5 Feature ID: U203-5  
 Applicant/Owner: Zayo Group State: Oregon Sampling Date: 8/15/2019  
 Investigator(s): LH/CG Section, Township, Range: S16, T37N, R13E  
 Local relief (hillside, terrace, etc.): Berm Local Relief (concave, convex, none): None Slope (%): 5  
 Subregion (LRR): D Lat: 41.03916 Long: -120.48106 Datum: NAD83  
 Soil Map Unit Name: (334) Ravendale silty clay, 0 to 2 percent slopes, occasionally flooded NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? No (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Sample confirmed as upland along slope where indicators of all three parameters are absent; pair point to W203-5.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u> = Total Cover		

Sapling/Shrub Stratum (Plot size: <u>15' radius</u> )				
1 <u>Arttri</u>	<u>Artemisia tridentata</u>	<u>30</u>	<u>YES</u>	<u>UPL</u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
5 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>30</u> = Total Cover		

Herb Stratum (Plot size: <u>5' radius</u> )				
1 <u>Gaydec</u>	<u>Gayophytum decipiens</u>	<u>40</u>	<u>YES</u>	<u>UPL</u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
5 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
6 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
7 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
8 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
9 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
10 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
11 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>40</u> = Total Cover		

Woody Vine Stratum (Plot size: <u>    </u> )				
1 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u> = Total Cover		

%Bare Ground in Herb Stratum: 60 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>40</u>	x 5 =	<u>200</u>
Column Totals: <u>40</u> (A)		<u>200</u> (B)
Prevalence Index = B/A =		<u>5</u>

### Hydrophytic Vegetation Indicators:

- No 1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Sample does not contain a dominance of hydrophytic vegetation.

SOIL							Sampling Point: SP 205-5				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>											
Depth (inches)	Matrix		Redox Features				Texture	Remarks			
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>					
0-16	7.5YR 3/2	100					Loamy clay	No redox			
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.				
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>											
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)					
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.											
<b>Restrictive Layer (if present):</b> Type: <span style="border-bottom: 1px solid black; display: inline-block; width: 150px;"></span> None Depth (inches): <span style="border-bottom: 1px solid black; display: inline-block; width: 150px;"></span> NA						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input type="checkbox"/> X <input checked="" type="checkbox"/>					
<b>Remarks:</b> Hydric soil indicators not observed.											
<b>HYDROLOGY</b>											
<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)						Secondary Indicators (2 or more required)					
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)						<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)					
						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)					
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <span style="border-bottom: 1px solid black; display: inline-block; width: 100px;"></span> NA Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <span style="border-bottom: 1px solid black; display: inline-block; width: 100px;"></span> NA Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <span style="border-bottom: 1px solid black; display: inline-block; width: 100px;"></span> NA (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input type="checkbox"/> X <input checked="" type="checkbox"/>					
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>											
<b>Remarks:</b> Wetland hydrology indicators not observed.											

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project, Group #5 City/County: Madeline/Lassen Co Sampling Point: 500-5 Feature ID: W500-5-A  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/27/2019  
 Investigator(s): MW/ JA Section, Township, Range: S9, T37N, R13E  
 Local relief (hillside, terrace, etc.): terrace Local Relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR): D Lat: 41.05311 Long: -120.47436 Datum: NAD83  
 Soil Map Unit Name: (197) Fiddler-Orhood-Petescreek association, 5 to 30 percent slopes NWI classification: PEM1Fx  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
 Are Vegetation N, Soil N, or Hydrology N naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

**Remarks:** Site hydrology appears to be driven by the adjacent river; wetland parameters evidenced by indicators of primary hydrology (surface water, high water table, and saturation), a dominance of hydrophytic vegetation, and hydric soil indicator F6 (redox dark surface).

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
5 _____	_____	_____	_____	_____
		0	= Total Cover	
Herb Stratum	(Plot size: 30' radius _____)			
1 <u>Elepal</u>	<u>Eleocharis palustris</u>	80	YES	OBL
2 <u>Junbal</u>	<u>Juncus balticus</u>	20	YES	FACW
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
5 _____	_____	_____	_____	_____
6 _____	_____	_____	_____	_____
7 _____	_____	_____	_____	_____
8 _____	_____	_____	_____	_____
9 _____	_____	_____	_____	_____
10 _____	_____	_____	_____	_____
11 _____	_____	_____	_____	_____
		100	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>80</u>	x 1 = <u>80</u>
FACW species <u>20</u>	x 2 = <u>40</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>120</u> (B)
Prevalence Index = B/A = <u>1.2</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes X No     

**Remarks:** Site is dominated by hydrophytic vegetation

SOIL							Sampling Point:	500-5
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-10	10YR 2/2	95	5YR 3/4	5	C	PL	Clay loam	Prominent redox
10-14	10YR 3/2	100					Sandy clay	
14	Refusal							
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: <u>Gravel/road fill</u>						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Depth (inches): <u>14</u>								
<b>Remarks:</b> Soils perched on a clay layer. Positive test for Fe++ using dipyrldyl strip. Hydric soil indicator F^ (redox dark surface) met by at least 5% redox concentrations occurring as soft masses in a layer at least 4 inches thick starting in the upper 8 inches of soil with a matrix value of 3 or less and chroma or 2 or less.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input checked="" type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>0</u>		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>0</u>						
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>0</u>						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Primary indicators of primary hydrolgy evidenced by surface water, saturation and water table present at the surface. One secondary indicator was also present (dominant species pass FAC-neutral test).								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project, Group #5 City/County: Madeline/Lassen Co Sampling Point: 501-5 Feature ID: U500-5  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/27/2019  
 Investigator(s): MW/JA Section, Township, Range: S9, T37N, R13E  
 Local relief (hillside, terrace, etc.): Road slope Local Relief (concave, convex, none): Convex Slope (%): 2  
 Subregion (LRR): D Lat: 41.05318 Long: -120.47433 Datum: NAD83  
 Soil Map Unit Name: (197) Fiddler-Orhood-Petescreek association, 5 to 30 percent slopes NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Sample confirmed as upland along slight slope where indicators of all three parameters are absent; pair point to W500-5-A.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>	= Total Cover	

Herb Stratum (Plot size: <u>5 foot radius</u> )				
1 <u>Epibra</u>	<u>Epilobium brachycarpum</u>	<u>10</u>	<u>NO</u>	<u>UPL</u>
2 <u>Brotec</u>	<u>Bromus tectorum</u>	<u>60</u>	<u>YES</u>	<u>UPL</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>70</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 25 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>70</u>	x 5 =	<u>350</u>
Column Totals: <u>70</u> (A)		<u>350</u> (B)
Prevalence Index = B/A =		<u>5</u>

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0<sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants<sup>1</sup>
- 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes      No X

Remarks: Area was dominated by upland vegetation. Bare ground was gravel roadfill.

[illegible]

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic Interconnect Project, Group #5 City/County: Lassen County Sampling Point: SP 200-5 Feature ID: NW200-5  
 Applicant/Owner: Zayo Group State: California Sampling Date: 8/14/2019  
 Investigator(s): LH/CG Section, Township, Range: S29, T36N, R13E  
 Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): D Lat: 40.92167 Long: -120.50424 Datum: NAD83  
 Soil Map Unit Name: (334) Ravendale siltyclay, 0 to 2 percent slopes, occasionally flooded NWI classification: PSSA  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? No (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

**Remarks:** Sample point documents previously mapped NWI feature; Sample point documents upland conditions where all three Wetland parameters are not observed; sample taken in linear depression where possible water influence has laid down annual grasses, otherwise no wetland hydrology indicators observed. 40 feet to east beyond ROW/ study area is suspect wetland.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: <u>Na</u> )	% Cover	Species?	Status
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum	(Plot size: <u>15' radius</u> )			
1	<u>Arttri</u>	<u>Artemisia tridentata</u>	<u>30</u>	<u>YES</u> <u>UPL</u>
2				
3				
4				
5				
		<u>30</u>	= Total Cover	

Herb Stratum	(Plot size: <u>5' radius</u> )			
1	<u>Elytra</u>	<u>Elymus trachycaulus</u>	<u>50</u>	<u>YES</u> <u>FACU</u>
2	<u>Rumeri</u>	<u>Rumex crispus</u>	<u>10</u>	<u>NO</u> <u>FAC</u>
3	<u>Lacser</u>	<u>Lactuca serriola</u>	<u>10</u>	<u>NO</u> <u>FACU</u>
4				
5				
6				
7				
8				
9				
10				
11				
		<u>70</u>	= Total Cover	

Woody Vine Stratum	(Plot size: <u>Na</u> )			
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 30 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant  
Species Across All Strata: 2 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	<u>0</u> x 1 =	<u>0</u>
FACW species	<u>0</u> x 2 =	<u>0</u>
FAC species	<u>10</u> x 3 =	<u>30</u>
FACU species	<u>60</u> x 4 =	<u>240</u>
UPL species	<u>30</u> x 5 =	<u>150</u>
Column Totals:	<u>100</u> (A)	<u>420</u> (B)
Prevalence Index = B/A =		<u>4.2</u>

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation  
Present?

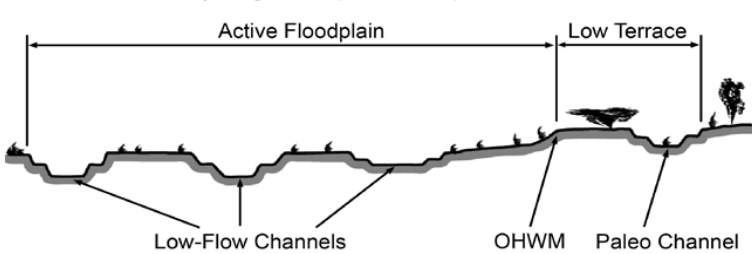
Yes      No X

**Remarks:** Sample does not contain a dominance of hydrophytic vegetation.



SOIL							Sampling Point: SP 200-5	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-13	10YR 4/1	100					Clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)					
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)					
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b> Type: _____ None Depth (inches): _____ NA						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Hydric soil indicators not observed in sample.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)						Secondary Indicators (2 or more required)		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input checked="" type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>NA</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>NA</u> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>NA</u> (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Wetland hydrology indicators only observed as drainage patterns via laid down grass from possible surface water flow; no additionalsecondary indicators observed to meet wetland hydrology.								

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 50-6		<b>Feature ID:</b> D50-6		<b>Date:</b> 8/13/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> HR/PF					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Along Highway 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.66866, -120.28311		
<b>Potential anthropogenic influences on the channel system:</b> Runoff from highway.					
<b>Brief site description:</b> Ephemeral stream that flows from valley to culvert and under highway.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer         </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:         </div> </div>					

### Wentworth Size Classes

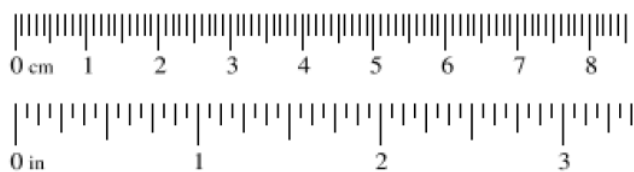
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud



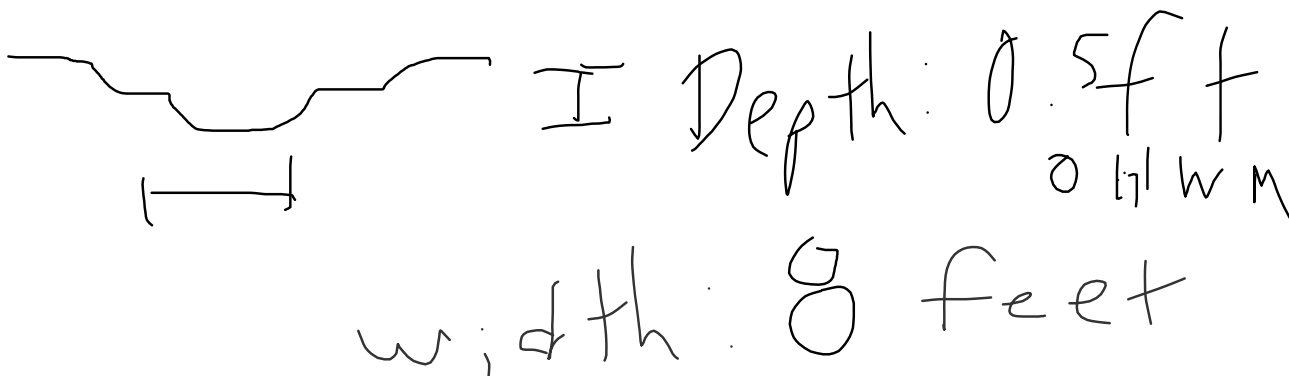
Feature ID:

Cross section ID:

Date:

Time:

Cross section drawing:



OHWM

GPS point: \_\_\_\_\_

Indicators:

☒ Change in average sediment texture

☒ Change in vegetation species

☒ Change in vegetation cover

☒ Break in bank slope

☒ Other: Exposed roots

☐ Other: \_\_\_\_\_

Comments:

OHWM width = 8ft. Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, change in vegetation species and cover. Additionally, scoured roots. Sampling point documents an ephemeral stream.

Floodplain unit:

☒ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA

☒ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

Indicators:

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☒ Presence of bed and bank

☐ Benches

☐ Soil development

☒ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

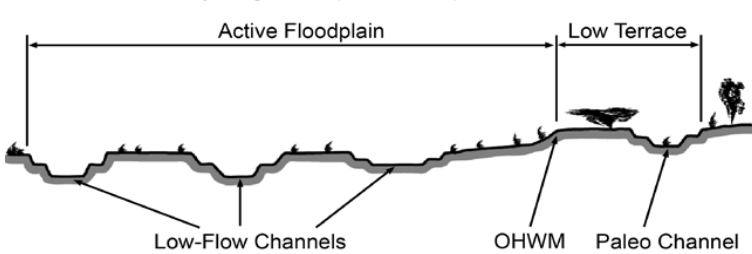
Comments:

Ephemeral stream

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 100-6		<b>Feature ID:</b> D100-6		<b>Date:</b> 8/14/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> SF/ ZB					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Along Highway 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.82631, -120.40406		
<b>Potential anthropogenic influences on the channel system:</b> Agriculture, roadway					
<b>Brief site description:</b> Small drainage, flowing east into ag field (no water present), sandy with large gravel throughout.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer         </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other: _____         </div> </div>					

### Wentworth Size Classes

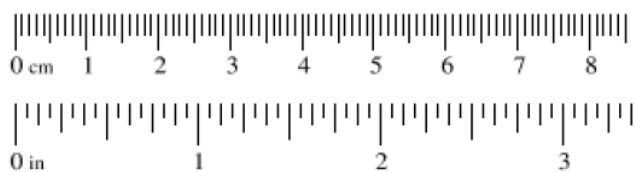
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud



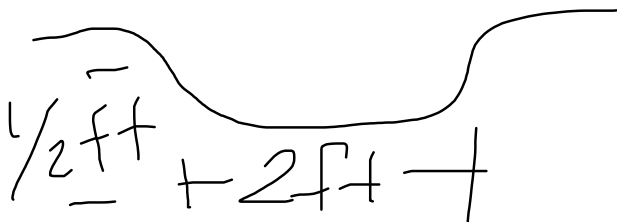
Feature ID: D100-6

Cross section ID:

Date:

Time:

Cross section drawing:



OHWM

GPS point: \_\_\_\_\_

Indicators:

☒ Change in average sediment texture

☐ Change in vegetation species

☒ Change in vegetation cover

☐ Break in bank slope

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

Comments:

Two OHWM indicators observed, change in avg sediment texture and change in vegetation cover. Sampling point documents an ephemeral stream.

Floodplain unit:

☒ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA

☒ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

Indicators:

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☒ Presence of bed and bank

☐ Benches

☐ Soil development

☒ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

Comments:

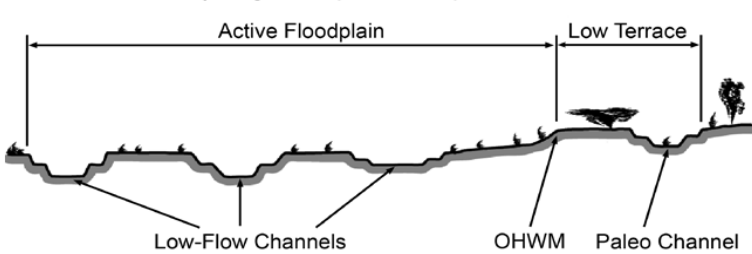
sandy with large gravel throughout



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 101-6		<b>Feature ID:</b> D101-6		<b>Date:</b> 8/14/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> SF/ ZB					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Along Highway 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.82699, -120.40549		
<b>Potential anthropogenic influences on the channel system:</b> Agriculture, roadway					
<b>Brief site description:</b> Small drainage flowing East into ag field (no water present), channel more defined in the east, less defined near C101-6, soil cracks along drainage channel.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

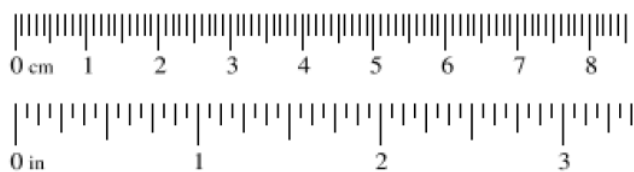
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud



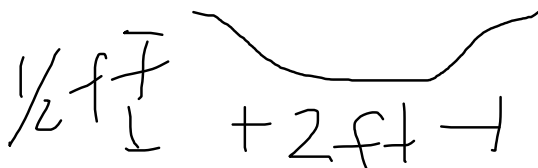
Feature ID: D106-6

Cross section ID:

Date:

Time:

Cross section drawing:



OHWM

GPS point: \_\_\_\_\_

Indicators:

- ☒ Change in average sediment texture  
☐ Change in vegetation species  
☒ Change in vegetation cover

- ☐ Break in bank slope  
☒ Other: Surface soil cracks  
☐ Other: \_\_\_\_\_

Comments:

Two OHWM indicators observed, change in avg sediment texture and change in vegetation cover. Sampling point documents a non-vegetated ditch.

Floodplain unit:

☒ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

- ☐ NA  
☒ Early (herbaceous & seedlings)  
☐ Mid (herbaceous, shrubs, saplings)  
☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☒ Mudcracks  
☐ Ripples  
☐ Drift and/or debris  
☒ Presence of bed and bank  
☐ Benches  
☐ Soil development  
☒ Surface relief  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

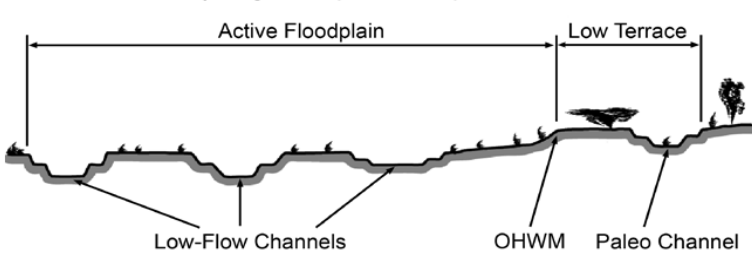
Comments:

soil cracks along drainage channel

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 200-6		<b>Feature ID:</b> D200-6		<b>Date:</b> 9/11/2019	
<b>Project:</b> Zayo Fiberoptic Interconnecty Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, TK, PF					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b>			
<b>Potential anthropogenic influences on the channel system:</b> Intermittent drainage adjacent to Highway					
<b>Brief site description:</b> Intermittent drainage at C200-6. OHWM and TOB are the same.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <div style="margin-left: 20px;">           a) Record the floodplain unit and GPS position.             b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.            c) Identify any indicators present at the location.         </div> 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer         </div> <div style="text-align: center;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:         </div> </div>					

### Wentworth Size Classes

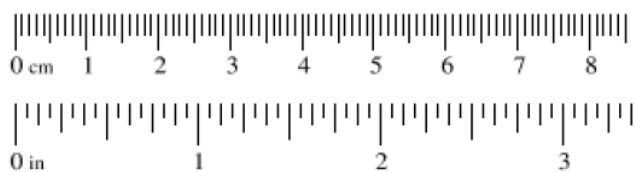
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud



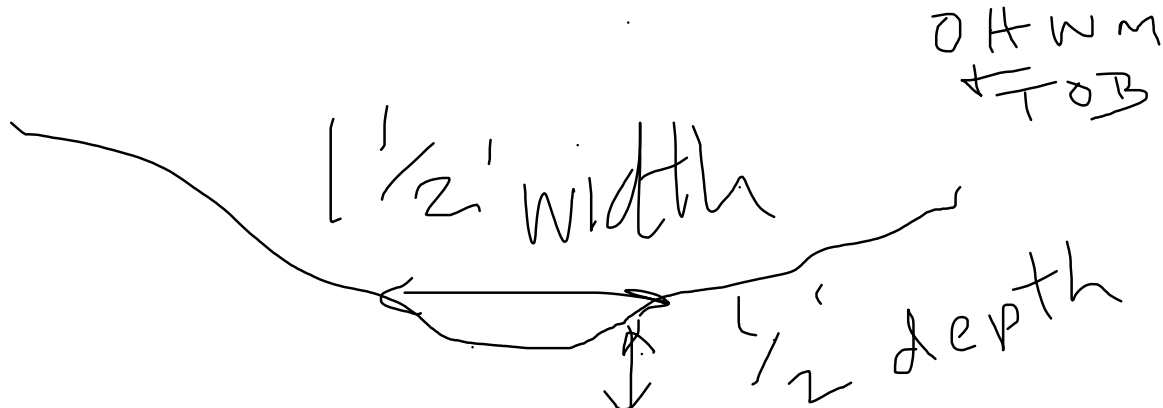
Feature ID:

Cross section ID:

Date:

Time:

Cross section drawing:



OHWM

GPS point: \_\_\_\_\_

Indicators:

☒ Change in average sediment texture

☐ Change in vegetation species

☒ Change in vegetation cover

☒ Break in bank slope

☐ Other: Drift deposits

☐ Other: \_\_\_\_\_

Comments:

Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, change in vegetation cover, and drift deposits. Sampling point documents an intermittent stream.

Floodplain unit:

☒ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

☐ NA

☒ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

Indicators:

☒ Mudcracks

☐ Ripples

☐ Drift and/or debris

☒ Presence of bed and bank

☐ Benches

☐ Soil development

☒ Surface relief

☐ Other: Surface soil cracks

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

Comments:

No water present in low-flow channel. Surface relief is present and the bed has surface soil cracks in the low-flow channel.



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Lassen County Sampling Date: 8/14/2019

Applicant/Owner: Zayo Group State: California Sampling Point: SP 13-6 Feature ID: W5-6

Investigator(s): MO/ JA Section, Township, Range: S14, T32N, R15E

Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR): D Lat: 40.64243 Long: -120.25506 Datum: NAD83

Soil Map Unit Name: (276) Loomis-Fivespring association, 5 to 30 percent slopes NWI classification: Emergent wetland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil Yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No     

Hydric Soil Present? Yes x No     

Wetland Hydrology Present? Yes x No     

Is the Sampled Area within a Wetland? Yes x No     

## Evaluation of features designated "Other Waters"

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

Remarks: Wetland parameters are present as indicated by hydrology indicators, and a dominance of hydrophytic vegetation. Site meets criteria for problematic hydric soils subject to ponding.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev. Species Name Absolute Dominant Indicator  
Tree Stratum (Plot size: 30' radius) % Cover Species? Status

1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)

1				
2				
3				
4				
5				
		0	= Total Cover	

Herb Stratum (Plot size: 5' radius)

1	Symchi	Symphyotrichum chilense	65	YES	FAC
2	Typlat	Typha latifolia	30	YES	OBL
3					
4					
5					
6					
7					
8					
9					
10					
11					
		95	= Total Cover		

Woody Vine Stratum (Plot size:     )

1				
2				
		0	= Total Cover	

% Bare Ground in Herb 5 % Cover of Biotic     

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	30	x 1 = 30
FACW species	0	x 2 = 0
FAC species	65	x 3 = 195
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	95	(A) 225 (B)
Prevalence Index = B/A =		2.3684

## Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is  $\leq 3.0$ <sup>1</sup>  
4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
5 - Wetland Non-Vascular Plants<sup>1</sup>  
6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## Hydrophytic Vegetation Present?

Yes X No     

Remarks: Hydrophytic vegetation present as indicated by a dominance of OBL and FAC species.

<b>SOIL</b>	<b>Sampling Point:</b>	<b>SP 13-6</b>
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 10%;">Depth (inches)</div> <div style="width: 15%; border-bottom: 1px solid black;"></div> <div style="width: 10%; border-bottom: 1px solid black;"></div> <div style="width: 15%; border-bottom: 1px solid black;"></div> <div style="width: 15%; border-bottom: 1px solid black;"></div> <div style="width: 10%; border-bottom: 1px solid black;"></div> <div style="width: 10%; border-bottom: 1px solid black;"></div> <div style="width: 15%;"></div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 10%; border-bottom: 1px solid black;"></div> <div style="width: 15%; border-bottom: 1px solid black;"></div> <div style="width: 10%; border-bottom: 1px solid black;"></div> <div style="width: 15%; border-bottom: 1px solid black;"></div> <div style="width: 15%; border-bottom: 1px solid black;"></div> <div style="width: 10%; border-bottom: 1px solid black;"></div> <div style="width: 10%; border-bottom: 1px solid black;"></div> <div style="width: 15%;"></div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 10%; border-bottom: 1px solid black;"></div> <div style="width: 15%; border-bottom: 1px solid black;"></div> <div style="width: 10%; border-bottom: 1px solid black;"></div> <div style="width: 15%; border-bottom: 1px solid black;"></div> <div style="width: 15%; border-bottom: 1px solid black;"></div> <div style="width: 10%; border-bottom: 1px solid black;"></div> <div style="width: 10%; border-bottom: 1px solid black;"></div> <div style="width: 15%;"></div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 10%; border-bottom: 1px solid black;"></div> <div style="width: 15%; border-bottom: 1px solid black;"></div> <div style="width: 10%; border-bottom: 1px solid black;"></div> <div style="width: 15%; border-bottom: 1px solid black;"></div> <div style="width: 15%; border-bottom: 1px solid black;"></div> <div style="width: 10%; border-bottom: 1px solid black;"></div> <div style="width: 10%; border-bottom: 1px solid black;"></div> <div style="width: 15%;"></div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 10%; border-bottom: 1px solid black;"></div> <div style="width: 15%; border-bottom: 1px solid black;"></div> <div style="width: 10%; border-bottom: 1px solid black;"></div> <div style="width: 15%; border-bottom: 1px solid black;"></div> <div style="width: 15%; border-bottom: 1px solid black;"></div> <div style="width: 10%; border-bottom: 1px solid black;"></div> <div style="width: 10%; border-bottom: 1px solid black;"></div> <div style="width: 15%;"></div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 10%; border-bottom: 1px solid black;"></div> <div style="width: 15%; border-bottom: 1px solid black;"></div> <div style="width: 10%; border-bottom: 1px solid black;"></div> <div style="width: 15%; border-bottom: 1px solid black;"></div> <div style="width: 15%; border-bottom: 1px solid black;"></div> <div style="width: 10%; border-bottom: 1px solid black;"></div> <div style="width: 10%; border-bottom: 1px solid black;"></div> <div style="width: 15%;"></div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 10%; border-bottom: 1px solid black;"></div> <div style="width: 15%; border-bottom: 1px solid black;"></div> <div style="width: 10%; border-bottom: 1px solid black;"></div> <div style="width: 15%; border-bottom: 1px solid black;"></div> <div style="width: 15%; border-bottom: 1px solid black;"></div> <div style="width: 10%; border-bottom: 1px solid black;"></div> <div style="width: 10%; border-bottom: 1px solid black;"></div> <div style="width: 15%;"></div> </div>		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.		<sup>4</sup> Location: PL=Pore Lining, M=Matrix.
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Histosol (A1)  <input type="checkbox"/> Histic Epipedon (A2)  <input type="checkbox"/> Black Histic (A3)  <input type="checkbox"/> Hydrogen Sulfide (A4)  <input checked="" type="checkbox"/> Stratified Layers (A5) (<b>LRR C</b>)  <input checked="" type="checkbox"/> 1 cm Muck (A9) (<b>LRR D</b>)  <input type="checkbox"/> Depleted Below Dark Surface (A11)  <input type="checkbox"/> Thick Dark Surface (A12)  <input type="checkbox"/> Sandy Mucky Mineral (S1)  <input type="checkbox"/> Sandy Gleyed Matrix (S4)             </div> <div style="width: 48%;"> <input type="checkbox"/> Sandy Redox (S5)  <input type="checkbox"/> Stripped Matrix (S6)  <input type="checkbox"/> Loamy Mucky Mineral (F1)  <input type="checkbox"/> Loamy Gleyed Matrix (F2)  <input type="checkbox"/> Depleted Matrix (F3)  <input type="checkbox"/> Redox Dark Surface (F6)  <input type="checkbox"/> Depleted Dark Surface (F7)  <input type="checkbox"/> Redox Depressions (F8)  <input type="checkbox"/> Vernal Pools (F9)             </div> <div style="width: 48%;"> <b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>  <input type="checkbox"/> 1 cm Muck (A9) (<b>LRR C</b>)  <input type="checkbox"/> 2 cm Muck (A10) (<b>LRR B</b>)  <input type="checkbox"/> Reduced Vertic (F18)  <input type="checkbox"/> Red Parent Material (TF2)  <input checked="" type="checkbox"/> Other (Explain in Remarks)             </div> </div>		
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<b>Restrictive Layer (if present):</b> Type: road prism Depth (inches): 8		<b>Hydric Soil Present?</b>  Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<b>Remarks:</b> Shovel refusal at 8 inches (road prism); hydric soil indicators not observed above restrictive layer. However, site meets criteria for problematc soils as chroma is low and may obscure redox. Area is likely influenced by surrounding agricultural conditions. Both wetland hydrology and hydrophytic vegetation parameters are present; site fuctionons as a wetland.		
<b>HYDROLOGY</b> <b>Wetland Hydrology Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <b>Primary Indicators (minimum of one required; check all that apply)</b>  <input type="checkbox"/> Surface Water (A1)  <input checked="" type="checkbox"/> High Water Table (A2)  <input checked="" type="checkbox"/> Saturation (A3)  <input type="checkbox"/> Water Marks (B1) (<b>Nonriverine</b>)  <input type="checkbox"/> Sediment Deposits (B2) (<b>Nonriverine</b>)  <input type="checkbox"/> Drift Deposits (B3) (<b>Nonriverine</b>)  <input type="checkbox"/> Surface Soil Cracks (B6)  <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)  <input type="checkbox"/> Water-Stained Leaves (B9)             </div> <div style="width: 48%;"> <input type="checkbox"/> Salt Crust (B11)  <input type="checkbox"/> Biotic Crust (B12)  <input type="checkbox"/> Aquatic Invertebrates (B13)  <input type="checkbox"/> Hydrogen Sulfide Odor (C1)  <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)  <input type="checkbox"/> Presence of Reduced Iron (C4)  <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)  <input type="checkbox"/> Thin Muck Surface (C7)  <input type="checkbox"/> Other (Explain in Remarks)             </div> </div>		
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (includes capillary fringe)		<b>Secondary Indicators (2 or more required)</b> <input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Wetland Hydrology Present?</b>  Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>  <hr/>		
<b>Remarks:</b> Hydrology indicators present as evidenced by high water table and saturation, as well as secondary indicators of drainage patterns and dominant species pass FAC-neutral test.		

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Lassen County Sampling Date: 8/14/2019

Applicant/Owner: Zayo Group State: California Sampling Point: SP 14-6 Feature ID: U5-6

Investigator(s): MO/ JA Section, Township, Range: S14, T32N, R15E

Local relief (hillside, terrace, etc.): Terrace Local Relief (concave, convex, none): Convex Slope (%): 2

Subregion (LRR): D Lat: 40.64247 Long: -120.25509 Datum: NAD83

Soil Map Unit Name: (276) Loomis-Fivespring association, 5 to 30 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x

Hydric Soil Present? Yes      No x

Wetland Hydrology Present? Yes      No x

Is the Sampled Area within a Wetland? Yes      No x

## Evaluation of features designated "Other Waters"

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

Remarks: Sample confirmed as upland where all indicators of wetland parameters are absent. Upland pair point to W5-6.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev. Species Name Absolute Dominant Indicator  
Tree Stratum (Plot size: 30' radius) % Cover Species? Status

1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)

1	Roswoo	Rosa woodsii	10	YES	FACU
2					
3					
4					
5					
		10	= Total Cover		

Herb Stratum (Plot size: 5' radius)

1	Cirarv	Cirsium arvense	5	NO	FACU
2	Vertha	Verbascum thapsus	5	NO	FACU
3	Symchi	Symphyotrichum chilense	15	YES	FAC
4	Schpra	Schedonorus pratensis	45	YES	FACU
5					
6					
7					
8					
9					
10					
11					
		70	= Total Cover		

Woody Vine Stratum (Plot size:     )

1				
2				
		0	= Total Cover	

% Bare Ground in Herb 30 % Cover of Biotic     

## Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant  
Species Across All Strata: 3 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 0.3333 (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	15	x 3 = 45
FACU species	65	x 4 = 260
UPL species	0	x 5 = 0
Column Totals:	80	(A)
Prevalence Index = B/A =		3.8125 (B)

## Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- No 2 - Dominance Test is >50%
- No 3 - Prevalence Index is  $\leq 3.0$ <sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants<sup>1</sup>
- 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## Hydrophytic Vegetation Present?

Yes ☐ No ☒

Remarks: Sample point dominated by FACU and FAC vegetation.

[illegible]

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Lassen County Sampling Date: 8/15/2019

Applicant/Owner: Zayo Group State: California Sampling Point: SP 15-6 Feature ID: W6-6

Investigator(s): MO/JA Section, Township, Range: S10, T32N, R15E

Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 4

Subregion (LRR): D Lat: 40.64759 Long: -120.26087 Datum: NAD83

Soil Map Unit Name: (276) Loomis-Fivespring association, 5 to 30 percent slopes NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No     

Hydric Soil Present? Yes x No     

Wetland Hydrology Present? Yes x No     

Is the Sampled Area within a Wetland? Yes x No     

## Evaluation of features designated "Other Waters"

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

Remarks: Wetland parameters are present as indicated by hydrology indicators, hydric soil indicator (F3), and a dominance of hydrophytic vegetation.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30' radius</u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

Sapling/Shrub Stratum (Plot size: <u>15' radius</u> )				
1				
2				
3				
4				
5				
		<u>0</u>		= Total Cover

Herb Stratum (Plot size: <u>5' radius</u> )				
1	<u>Carneb</u>	<u>Carex nebrascensis</u>	<u>10</u>	<u>NO</u>
2	<u>Agrgig</u>	<u>Agrostis gigantea</u>	<u>60</u>	<u>YES</u>
3	<u>Rumcri</u>	<u>Rumex crispus</u>	<u>10</u>	<u>NO</u>
4	<u>Mimgut</u>	<u>Mimulus guttatus</u>	<u>5</u>	<u>NO</u>
5	<u>Symchi</u>	<u>Symphyotrichum chilense</u>	<u>5</u>	<u>NO</u>
6				
7				
8				
9				
10				
11				
			<u>90</u>	= Total Cover

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
			<u>0</u>	= Total Cover

% Bare Ground in Herb 10 % Cover of Biotic     

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>15</u>	x 1 =	<u>15</u>
FACW species <u>60</u>	x 2 =	<u>120</u>
FAC species <u>15</u>	x 3 =	<u>45</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>90</u>	(A)	<u>180</u> (B)
Prevalence Index = B/A = <u>2</u>		

## Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
  - Yes 2 - Dominance Test is >50%
  - Yes 3 - Prevalence Index is  $\leq 3.0$ <sup>1</sup>
  - 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
  - 5 - Wetland Non-Vascular Plants<sup>1</sup>
  - 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## Hydrophytic Vegetation Present?

Yes X No     

Remarks: Hydrophytic vegetation present as indicated by a dominance of a FACW species.

SOIL							Sampling Point: SP 15-6	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10 YR 4/1	90	5 YR 4/6	10	C	M	Loamy clay	Prominent redox concentrations
4-18	10 YR 4/1	80	5 YR 4/6	20	C	M	Loamy clay	Prominent redox concentrations
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)								
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)		Indicators for Problematic Hydric Soils <sup>3</sup> :					
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> 1 cm Muck (A9) (LRR C)					
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		<input type="checkbox"/> 2 cm Muck (A10) (LRR B)					
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Reduced Vertic (F18)					
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Red Parent Material (TF2)					
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)		<input type="checkbox"/> Other (Explain in Remarks)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)							
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
Restrictive Layer (if present):			Hydric Soil Present?					
Type: <input type="text"/> None			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Depth (inches): <input type="text"/> NA								
Remarks: Hydric soil indicators are observed and meet indicators of F3 Depleted Matrix, with indicators of a soil that is at least 6 inches thick starting in the top 10 inches of soil surface, with redox concentrations (soft masses or pore linings), in a matrix with a value of 4 or more and chroma of 2 or less.								
HYDROLOGY								
Wetland Hydrology Indicators:			Secondary Indicators (2 or more required)					
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) (Riverine)					
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) (Riverine)					
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) (Riverine)					
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input checked="" type="checkbox"/> Drainage Patterns (B10)					
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)					
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)					
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)					
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)					
Field Observations:			Wetland Hydrology Present?					
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/> NA				
Water Table Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	<input type="text"/> 2				
Saturation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	<input type="text"/> 0				
(includes capillary fringe)			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks: Hydrology indicators present as evidenced by high water table and saturation.								

**WETLAND DETERMINATION DATA FORM -Arid West Region**

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Lassen County Sampling Date: 8/15/2019

Applicant/Owner: Zayo Group State: California Sampling Point: SP 16-6 Feature ID: U6-6

Investigator(s): MO/ JA Section, Township, Range: S10, T32N, R15E

Local relief (hillside, terrace, etc.): Terrace Local Relief (concave, convex, none): Convex Slope (%): 3

Subregion (LRR): D Lat: 40.64762 Long: -120.26084 Datum: NAD83

Soil Map Unit Name: (276) Loomis-Fivespring association, 5 to 30 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes      No x

Hydric Soil Present? Yes      No x

Wetland Hydrology Present? Yes      No x

Is the Sampled Area within a Wetland? Yes      No x

**Evaluation of features designated "Other Waters"**

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

**Remarks:** Sample confirmed as upland where indicators of all three wetland parameters are absent. Upland pair point to W6-6.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER**

3/3 Abbrev. Species Name Absolute Dominant Indicator  
Tree Stratum (Plot size: 30' radius) % Cover Species? Status

1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)

1	Arttri	Artemisia tridentata	10	YES	UPL
2					
3					
4					
5					
		10	= Total Cover		

Herb Stratum (Plot size: 5' radius)

1	Ericun	Ericameria cuneata	30	YES	UPL
2	Tradub	Tragopogon dubius	20	YES	UPL
3	Brotec	Bromus tectorum	35	YES	UPL
4					
5					
6					
7					
8					
9					
10					
11					
		85	= Total Cover		

Woody Vine Stratum (Plot size:     )

1				
2				
		0	= Total Cover	

% Bare Ground in Herb 15 % Cover of Biotic     

**Dominance Test worksheet:**

Number of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant  
Species Across All Strata: 4 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	95	x 5 = 475
Column Totals:	95 (A)	475 (B)
Prevalence Index = B/A =		5

**Hydrophytic Vegetation Indicators:**

- 1 - Rapid Test for Hydrophytic Vegetation
  - No 2 - Dominance Test is >50%
  - No 3 - Prevalence Index is ≤3.0<sup>1</sup>
  - 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
  - 5 - Wetland Non-Vascular Plants<sup>1</sup>
  - 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☐ No ☒

**Remarks:** Sample point dominated by UPL vegetation.



SOIL							Sampling Point: SP 16-6	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 2/2	100					Silty loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.
<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
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<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**  
 Type: None  
 Depth (inches): NA

**Hydric Soil Present?**  
 Yes ☐ No ☒

**Remarks:** Soil pit lacks hydric soil indicators.

**HYDROLOGY**

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
<b>Primary Indicators (minimum of one required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)

**Field Observations:**  
 Surface Water Present? Yes ☐ No ☒ Depth (inches): NA  
 Water Table Present? Yes ☐ No ☒ Depth (inches): NA  
 Saturation Present? Yes ☐ No ☒ Depth (inches): NA  
 (includes capillary fringe)

**Wetland Hydrology Present?**  
 Yes ☐ No ☒

**Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:** No hydrology indicators observed.

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Lassen Sampling Date: 9/11/2019

Applicant/Owner: Zayo Group State: California Sampling Point: SP 201-6 Feature ID: W200-6

Investigator(s): TK/PF/MO Section, Township, Range: S6, T33N, R15E

Local relief (hillside, terrace, etc.): Swale Local Relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR): D Lat: 40.74572 Long: -120.32341 Datum: NAD83

Soil Map Unit Name: (356) Searles-Devada-Fivesprings association, 2 to 30 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No     

Hydric Soil Present? Yes x No     

Wetland Hydrology Present? Yes x No     

Is the Sampled Area within a Wetland? Yes x No     

## Evaluation of features designated "Other Waters"

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

Remarks: Wetland parameters were indicated by a dominance of hydrophytic vegetation, hydric soil indicator (F6), and primary wetland hydrology indicator of surface soil cracks indicating recent inundation.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev. Species Name Absolute Dominant Indicator  
Tree Stratum (Plot size:     ) % Cover Species? Status

1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size:     )

1				
2				
3				
4				
5				
		0	= Total Cover	

Herb Stratum (Plot size: 5 foot radius)

1	Junbal	Juncus balticus	30	YES	FACW
2	Agopar	Agoseris parviflora	10	NO	FACU
3	Tricya	Trifolium cyathiferum	10	NO	FAC
4	Lactat	Lactuca tatarica	15	YES	FAC
5					
6					
7					
8					
9					
10					
11					
		65	= Total Cover		

Woody Vine Stratum (Plot size:     )

1				
2				
		0	= Total Cover	

% Bare Ground in Herb 45 % Cover of Biotic 0

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	0	x 1 = 0
FACW species	30	x 2 = 60
FAC species	25	x 3 = 75
FACU species	10	x 4 = 40
UPL species	0	x 5 = 0
Column Totals:	65	(A)
Prevalence Index = B/A =		2.6923 (B)

## Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is  $\leq 3.0$ <sup>1</sup>  
4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
5 - Wetland Non-Vascular Plants<sup>1</sup>  
6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## Hydrophytic Vegetation Present?

Yes X No     

Remarks: Dominance of hydrophytic vegetation present.

SOIL							Sampling Point: SP 201-6	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 3/3	100					Silty loam	No redox
4-10	7.5YR 3/2	90	2.5YR 3/4	10	C	M	Sandy loam	Prominent redox concentrations
10-14	10YR 4/2	95	5YR 4/6	5	C	M	Sandy clay loam	Prominent redox concentrations

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.
<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if present):</b> Type: <u>None</u> Depth (inches): <u>NA</u>	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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**Remarks:** Indicator F6 (Redox dark surface) was met by at least 5 % prominent redox concentrations occurring as soft masses in a layer at least 4 inches thick in the upper 8 inches.

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one required; check all that apply)</b> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><input type="checkbox"/> Surface Water (A1)</td> <td style="width: 50%; border: none;"><input type="checkbox"/> Salt Crust (B11)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> High Water Table (A2)</td> <td style="border: none;"><input type="checkbox"/> Biotic Crust (B12)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Saturation (A3)</td> <td style="border: none;"><input type="checkbox"/> Aquatic Invertebrates (B13)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Water Marks (B1) (<b>Nonriverine</b>)</td> <td style="border: none;"><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Sediment Deposits (B2) (<b>Nonriverine</b>)</td> <td style="border: none;"><input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Drift Deposits (B3) (<b>Nonriverine</b>)</td> <td style="border: none;"><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td style="border: none;"><input checked="" type="checkbox"/> Surface Soil Cracks (B6)</td> <td style="border: none;"><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td style="border: none;"><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Water-Stained Leaves (B9)</td> <td style="border: none;"><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> </table>	<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<b>Secondary Indicators (2 or more required)</b> <table style="width: 100%; border: none;"> <tr><td style="border: none;"><input type="checkbox"/> Water Marks (B1) (<b>Riverine</b>)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Sediment Deposits (B2) (<b>Riverine</b>)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Drift Deposits (B3) (<b>Riverine</b>)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Drainage Patterns (B10)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Dry-Season Water Table (C2)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Crayfish Burrows (C8)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Shallow Aquitard (D3)</td></tr> <tr><td style="border: none;"><input checked="" type="checkbox"/> FAC-Neutral Test (D5)</td></tr> </table>	<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )	<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )	<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Shallow Aquitard (D3)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)																											
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)																											
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)																											
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)																											
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<input type="checkbox"/> Shallow Aquitard (D3)																												
<input checked="" type="checkbox"/> FAC-Neutral Test (D5)																												

<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>NA</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>NA</u> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>NA</u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	--

**Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:** Primary hydrology indicator of surface soil cracks was observed, as was one secondary indicator (dominant species passed FAC-neutral test).

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Lassen Sampling Date: 9/11/2019

Applicant/Owner: Zayo Group State: California Sampling Point: SP 202-6 Feature ID: U200-6

Investigator(s): TK/PF/MO Section, Township, Range: S6,T33N, R15E

Local relief (hillside, terrace, etc.): Swale Local Relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR): D Lat: 40.74573 Long: -120.32345 Datum: NAD83

Soil Map Unit Name: (356) Searles-Devada-Fivesprings association, 2 to 30 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x

Hydric Soil Present? Yes      No x

Wetland Hydrology Present? Yes      No x

Is the Sampled Area within a Wetland? Yes      No x

## Evaluation of features designated "Other Waters"

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

Remarks: Sample confirmed as upland along slope where all three parameters are absent. Upland pair point to W200-6.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev. Species Name Absolute Dominant Indicator  
Tree Stratum (Plot size:     ) % Cover Species? Status

1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 foot radius)

1	Arttri	Artemisia tridentata	5	YES	UPL
2					
3					
4					
5					
		5	= Total Cover		

Herb Stratum (Plot size: 5 foot radius)

1	Eriumb	Erigeron umbellatum	5	YES	UPL
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
		5	= Total Cover		

Woody Vine Stratum (Plot size:     )

1				
2				
		0	= Total Cover	

% Bare Ground in Herb 95 % Cover of Biotic 0

## Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant  
Species Across All Strata: 2 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A/B)

## Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	10	x 5 = 50
Column Totals:	10	(A) 50 (B)
Prevalence Index = B/A =		5

## Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- No 2 - Dominance Test is >50%
- No 3 - Prevalence Index is ≤3.0<sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants<sup>1</sup>
- 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## Hydrophytic Vegetation Present?

Yes      No X

Remarks:

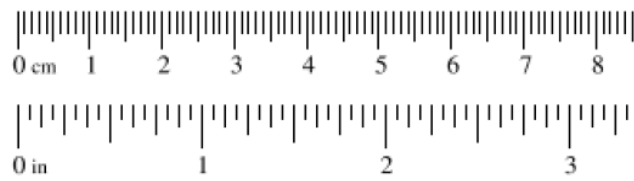
[illegible]

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 01-7		<b>Feature ID:</b> D01-7		<b>Date:</b> 8/28/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> P. Ferral, T. Kayatsky					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Along Highway 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.56609, -120.25435		
<b>Potential anthropogenic influences on the channel system:</b> Roadside Adjacent to Highway U.S. 395					
<b>Brief site description:</b> Small meandering intermittent stream through shrubland. Cross apply D02-7 (a tributary of D01-7). No floodplain present. Top of bank and OHWM are the same.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS		<input type="checkbox"/> Other:	
<input type="checkbox"/> Digitized on computer					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

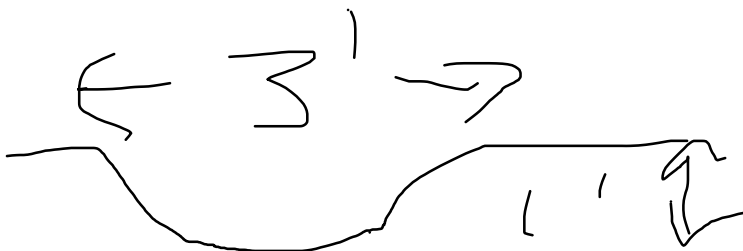


Feature ID: D01-7

Cross section ID:

Date:

Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

Defined bed and bank feature. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an intermittent stream.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

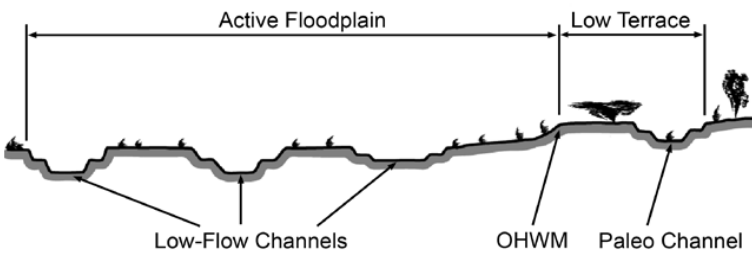
No floodplain present beyond banks.



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b><u>Floodplain unit:</u></b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

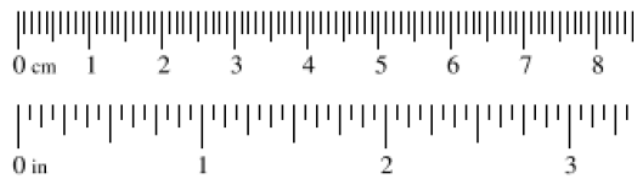
<b><u>Floodplain unit:</u></b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 1-7		<b>Feature ID:</b> D1-7		<b>Date:</b> 8/13/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, J. Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Along Highway 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.59234, -120.24848			
<b>Potential anthropogenic influences on the channel system:</b> Roadside with culvert, built up with rip rap and cement bags. On east side, cattle impacts are prominent and have narrowed the stream greatly.					
<b>Brief site description:</b> Perennial stream that runs under highway, impacted by cattle where stream begins to lose indicators of OHWM and becomes wetland.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div style="text-align: center;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

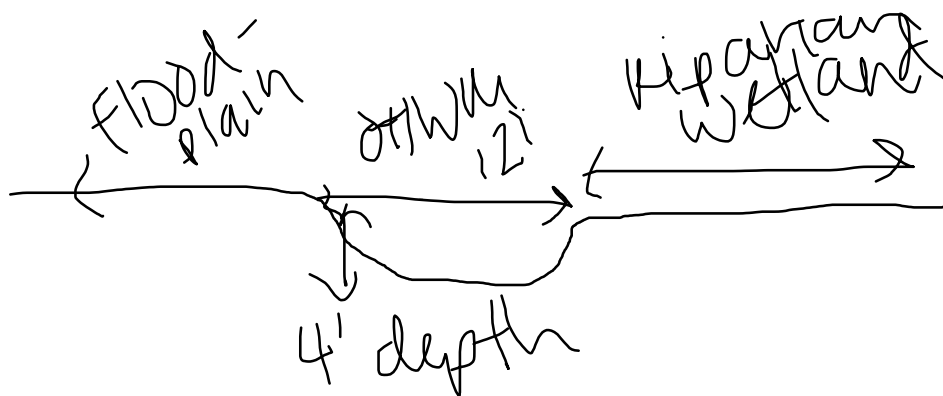


Feature ID: D1

Cross section ID: 1

Date: 13-Aug

Time: 1030

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

Perennial stream. Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Silty clayTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



Other: \_\_\_\_\_

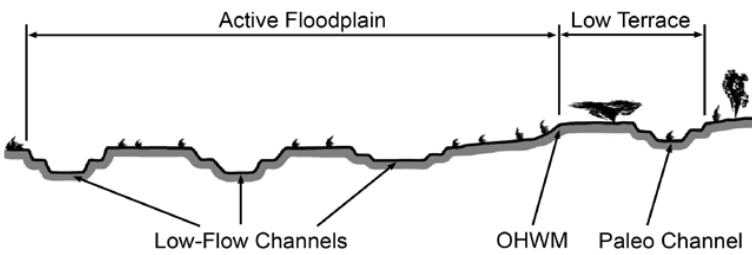
**Comments:**

Bed of perennial stream is low-flow channel and has water present at time of survey.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input checked="" type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Silty loam</u>			
Total veg cover: <u>80</u> % Tree: <u>0</u> % Shrub: <u>20</u> % Herb: <u>60</u> %			
Community successional stage:			
<input type="checkbox"/> NA	<input checked="" type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input checked="" type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input checked="" type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			
Floodplain has mugwort, Carex, and lactuca, and mint. Mapped below TOB.			

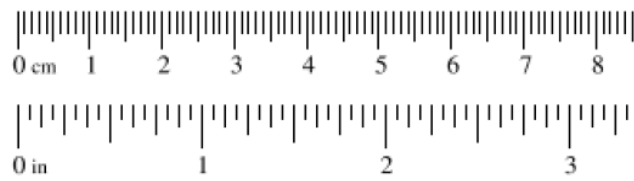
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 8-7		<b>Feature ID:</b> D2-7		<b>Date:</b> 8/14/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, J. Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Along Highway 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.61824, -120.24531			
<b>Potential anthropogenic influences on the channel system:</b> Within field, grazing cattle impacts are apparent and channel is incized in areas.					
<b>Brief site description:</b> Intermittent stream impacted by cattle where stream begins to lose indicators of OHWM and becomes wetland.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies: </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>  Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <input type="checkbox"/> Mapping on aerial photograph    <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Digitized on computer    <input type="checkbox"/> Other: </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

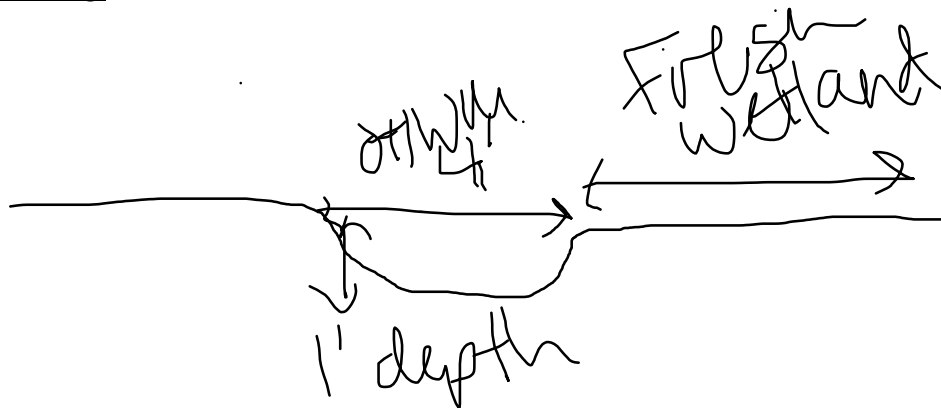


Feature ID: D2-7

Cross section ID: 1

Date: 14-Jan

Time: 1100

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:

Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

Comments:

Defined bed and bank feature. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an intermittent stream.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: Silty clayTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

Indicators:

Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



Other: \_\_\_\_\_

Comments:

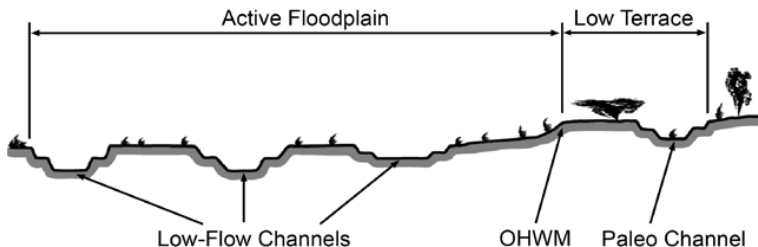
Bed of intermittent stream is low-flow channel.



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

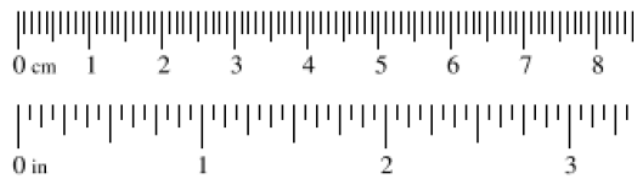
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 9-7		<b>Feature ID:</b> D3-7		<b>Date:</b> 8/14/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, J. Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Along Highway 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.61793, -120.24495		
<b>Potential anthropogenic influences on the channel system:</b> Within field, grazing cattle impacts are likely.					
<b>Brief site description:</b> Perennial stream (Secret Creek), vegetation actively encroaching within active channel in some areas.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <input type="checkbox"/> Mapping on aerial photograph             <input checked="" type="checkbox"/> GPS             <input type="checkbox"/> Digitized on computer             <input type="checkbox"/> Other:             </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

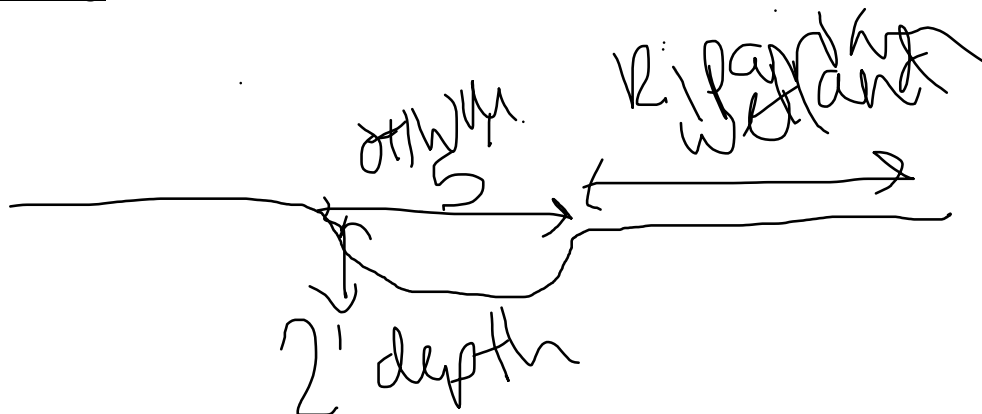


Feature ID: D3-7

Cross section ID: 1

Date: 14-Aug

Time: 1130

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

Comments:

Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and changes in vegetation species and cover. Sampling point documents a perennial stream.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: Silty clayTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 10 %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

Indicators:

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

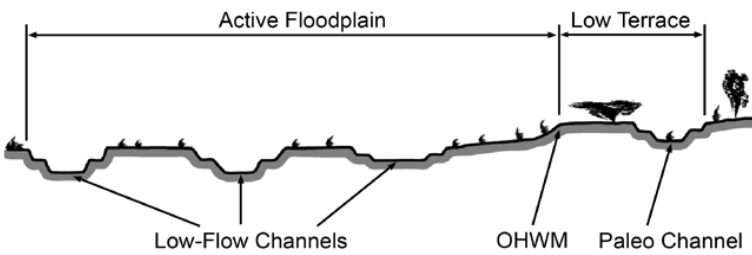
Comments:

Bed of perennial stream is low-flow channel and has water present at time of survey.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

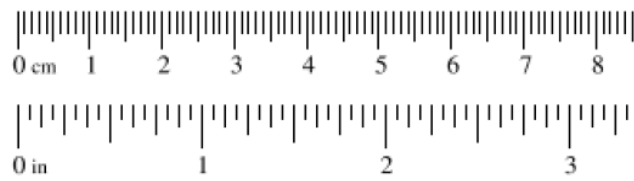
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP04-7		<b>Feature ID:</b> D04-7		<b>Date:</b> 8/29/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> P. Ferral, T. Kayatsky					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Along Highway 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.39115, -120.30701			
<b>Potential anthropogenic influences on the channel system:</b> Two large culverts and adjacent roadway.					
<b>Brief site description:</b> Large drainage with two large culverts bringing water from north side of Highway 395. Large boulders and cobbles lining streambed. Most likely intermittent stream, no water at time of					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

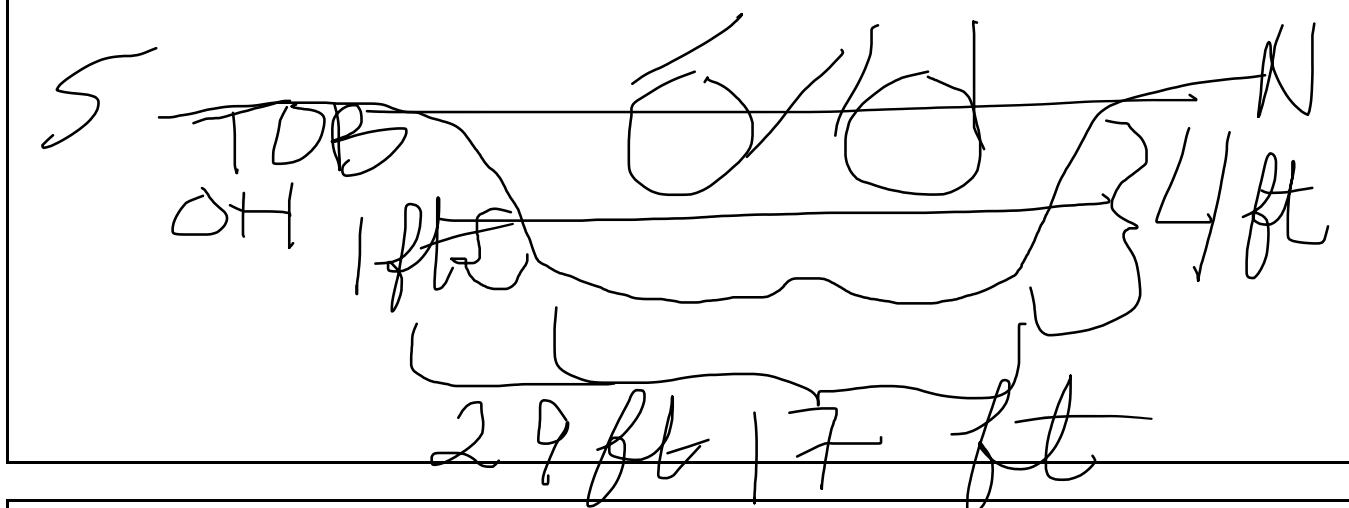


Feature ID: D04-7

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:

Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: Sediment sorting



Other: \_\_\_\_\_

Comments:

OHWM width = 20ft. Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an intermittent stream.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

Indicators:

Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



Other: \_\_\_\_\_

Comments:

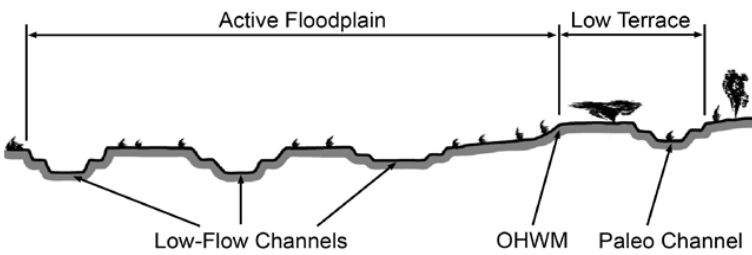
Sagebrush community adjacent to streambed



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

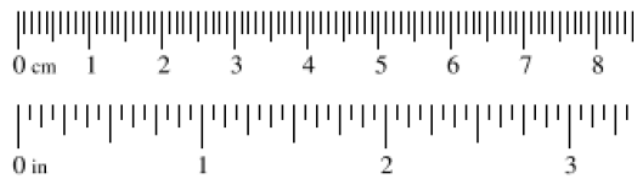
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP10-7		<b>Feature ID:</b> D4-7		<b>Date:</b> 8/14/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, J. Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Along Highway 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.62108, -120.24618			
<b>Potential anthropogenic influences on the channel system:</b> Creek crosses under highway and is likely influenced by cattle. Also, old road present along creek.					
<b>Brief site description:</b> Perennial stream (Secret Creek) flows under highway.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input type="checkbox"/> Mapping on aerial photograph             <input checked="" type="checkbox"/> GPS             <input type="checkbox"/> Digitized on computer             <input type="checkbox"/> Other:             </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

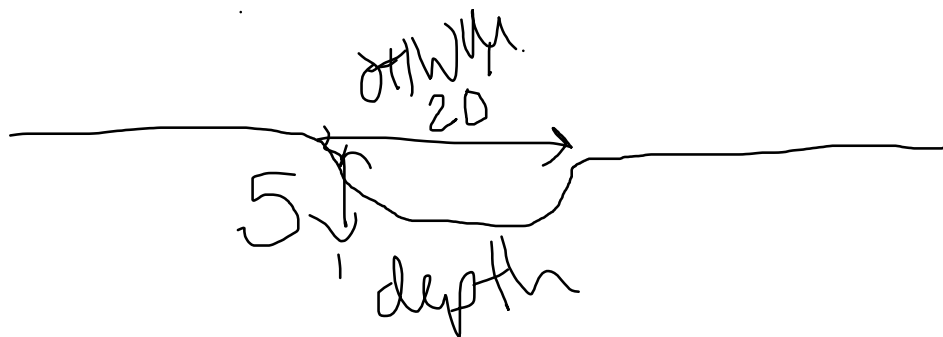


Feature ID: D4-7

Cross section ID: 1

Date: 14-Aug

Time: 1245

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒

Change in average sediment texture

☐

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

Comments:

Water present. OHWM and TOB same. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents a perennial stream.

Floodplain unit:☒

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: Cobble, BoulderTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

☒

NA

☐

Early (herbaceous &amp; seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

Indicators:☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☒

Presence of bed and bank

☐

Benches

☐

Soil development

☒

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

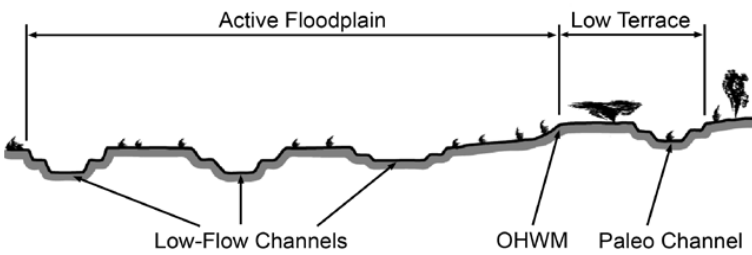
Comments:

Bed of perennial stream is low-flow channel and has water present at time of survey.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

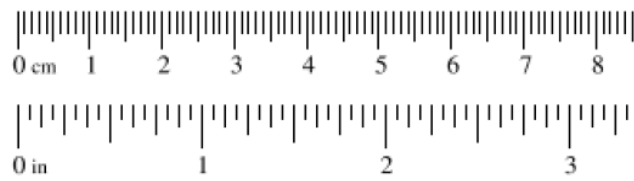
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP05-7		<b>Feature ID:</b> D05-7		<b>Date:</b> 8/29/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> T. Kayatsky, P. Ferral					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Along Highway 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.40463, -120.28785			
<b>Potential anthropogenic influences on the channel system:</b> Right off the highway.					
<b>Brief site description:</b> Stream runs parallel to the highway. Lined with boulders and cobbles. Sagebrush community. No water at time of survey. Ephemeral stream. Channel originates in ROW.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
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### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

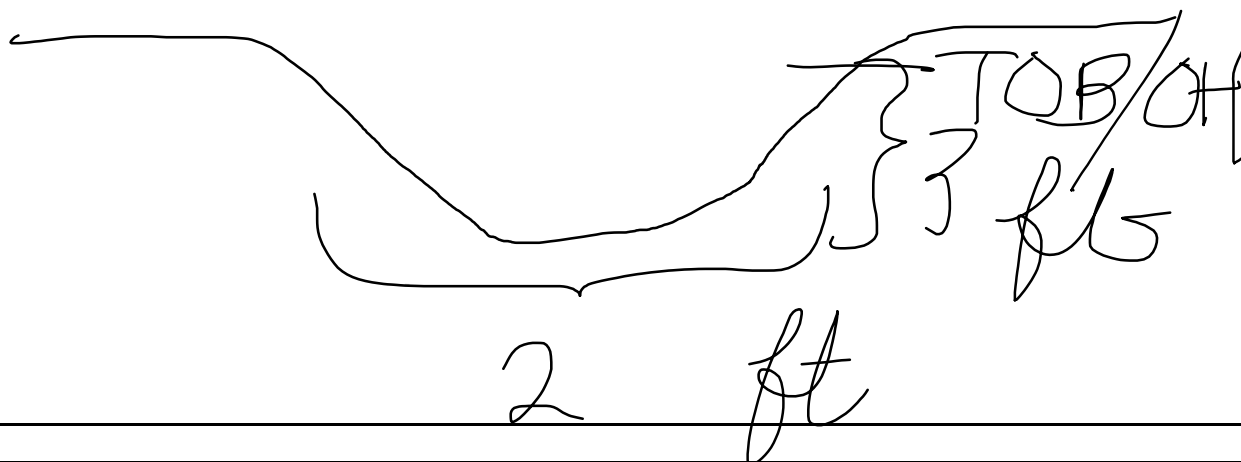


Feature ID: D05-7

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:

Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: Sediment sorting



Other: \_\_\_\_\_

Comments:

Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: 20 % Tree: \_\_\_\_\_ % Shrub: 20 % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

Indicators:

Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: Sediment sorting



Other: \_\_\_\_\_



Other: \_\_\_\_\_

Comments:

Small section with active floodplain in middle of channel, about 20 ft long and 10 ft wide. Area lined with rocks and boulders.



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

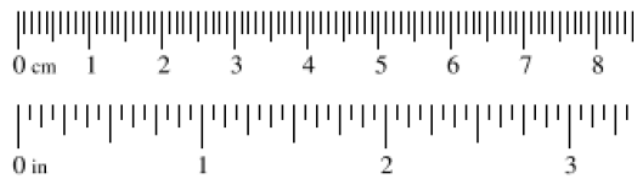
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP20-7		<b>Feature ID:</b> D10-7		<b>Date:</b> 8/15/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> S. Fritz, Z. Buecker					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Along Highway 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.60098, -120.24091		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
<b>Potential anthropogenic influences on the channel system:</b> Roadway adjacent to man-made drainage feature (ditch).					
<b>Brief site description:</b> Rocky drainage, flowing into ag field connecting into wetland					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>  </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

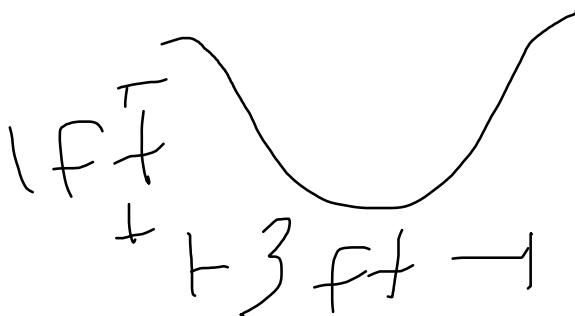


Feature ID: D10-7

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

**Indicators:**☒

Change in average sediment texture

☐

Change in vegetation species

☒

Change in vegetation cover

☐

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

Constructed bed and bank feature. Two OHWM indicators observed, change in vegetation cover and change in sediment texture. Sampling point documents a non-vegetated ditch.

Floodplain unit:☒

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: cobbles and bouldersTotal veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: 15 %

Community successional stage:

☐

NA

☒

Early (herbaceous &amp; seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☒

Presence of bed and bank

☐

Benches

☐

Soil development

☒

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

Feature ID:

Cross section ID:

Date:

Time:

Floodplain unit:

☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Mid (herbaceous, shrubs, saplings)

☐

Early (herbaceous & seedlings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐

Mudcracks

☐

Soil development

☐

Ripples

☐

Surface relief

☐

Drift and/or debris

☐

Other: \_\_\_\_\_

☐

Presence of bed and bank

☐

Other: \_\_\_\_\_

☐

Benches

☐

Other: \_\_\_\_\_

**Comments:**

Floodplain unit:

☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Mid (herbaceous, shrubs, saplings)

☐

Early (herbaceous & seedlings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐

Mudcracks

☐

Soil development

☐

Ripples

☐

Surface relief

☐

Drift and/or debris

☐

Other: \_\_\_\_\_

☐

Presence of bed and bank

☐

Other: \_\_\_\_\_

☐

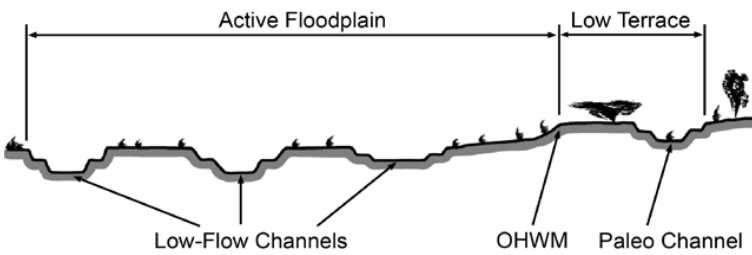
Benches

☐

Other: \_\_\_\_\_

**Comments:**

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 21-7		<b>Feature ID:</b> D11-7		<b>Date:</b> 8/15/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> S. Fritz, Z. Buecker					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Along Highway 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.63612, -120.25248			
<b>Potential anthropogenic influences on the channel system:</b> Roadway adjacent to Highway U.S. 395.					
<b>Brief site description:</b> Wide, rocky drainage flowing into C16, large boulders with sand and gravel mixed throughout, drainage ends before ROW.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
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### Wentworth Size Classes

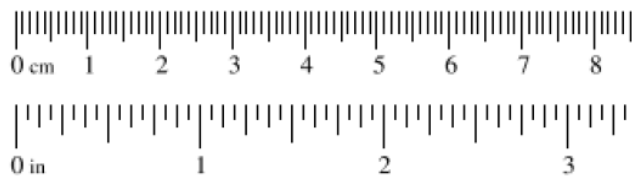
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		Granule
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1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud



Feature ID: D11-7

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

## Indicators:



Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

## Comments:

Two OHWM indicators observed, change in vegetation cover and change in sediment texture. Sampling point documents a non-vegetated ditch.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

## Characteristics of the floodplain unit:

Average sediment texture: Cobbles, boulders, sandTotal veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: 10 %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

## Indicators:



Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



Other: \_\_\_\_\_

## Comments:



Feature ID:

Cross section ID:

Date:

Time:

Floodplain unit:

☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Mid (herbaceous, shrubs, saplings)

☐

Early (herbaceous & seedlings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐

Mudcracks

☐

Soil development

☐

Ripples

☐

Surface relief

☐

Drift and/or debris

☐

Other: \_\_\_\_\_

☐

Presence of bed and bank

☐

Other: \_\_\_\_\_

☐

Benches

☐

Other: \_\_\_\_\_

**Comments:**

Floodplain unit:

☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Mid (herbaceous, shrubs, saplings)

☐

Early (herbaceous & seedlings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐

Mudcracks

☐

Soil development

☐

Ripples

☐

Surface relief

☐

Drift and/or debris

☐

Other: \_\_\_\_\_

☐

Presence of bed and bank

☐

Other: \_\_\_\_\_

☐

Benches

☐

Other: \_\_\_\_\_

**Comments:**

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 200-7		<b>Feature ID:</b> D200-7		<b>Date:</b> 9/10/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, T. Kayatsky, P. Ferral					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.39455, -120.29923		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
<b>Potential anthropogenic influences on the channel system:</b> Intermittent drainage adjacent to Highway.					
<b>Brief site description:</b> Small intermittent stream. OHWM and TOB are the same.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>  </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

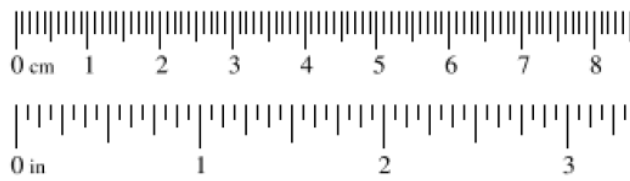
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud

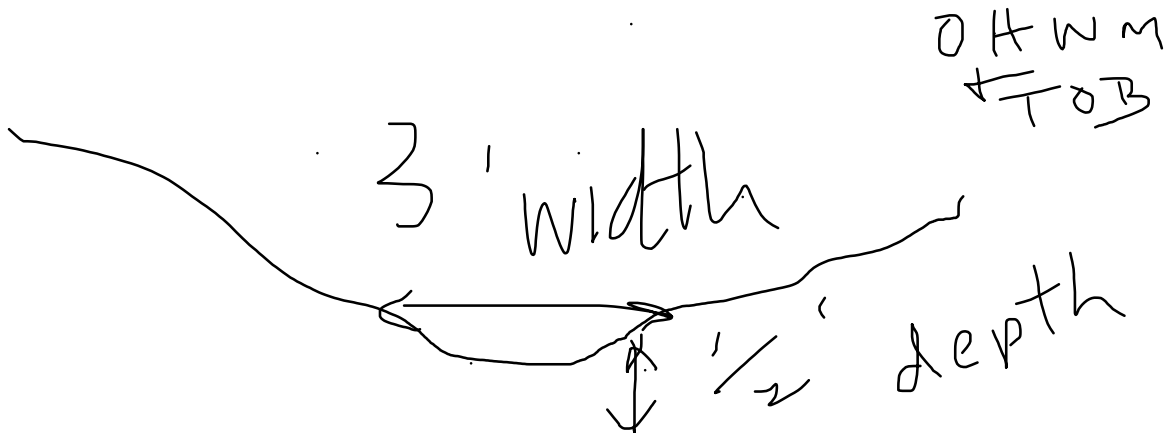


Feature ID: D200-7

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

## Indicators:

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species                  | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

## Comments:

OHWM average width = 10 ft. Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an intermittent stream.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

## Characteristics of the floodplain unit:

Average sediment texture: Cobbles and bouldersTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> NA                  | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

## Indicators:

- |  |   |
|--|---|
| <input type="checkbox"/> Mudcracks                           | <input type="checkbox"/> Soil development                             |
| <input type="checkbox"/> Ripples                             | <input checked="" type="checkbox"/> Surface relief                    |
| <input type="checkbox"/> Drift and/or debris                 | <input checked="" type="checkbox"/> Other: <u>Surface soil cracks</u> |
| <input checked="" type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____                                 |
| <input type="checkbox"/> Benches                             | <input type="checkbox"/> Other: _____                                 |

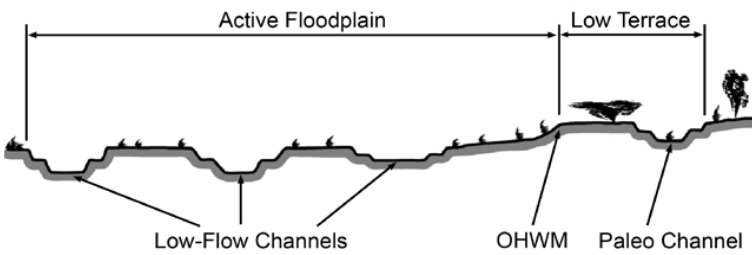
## Comments:

No water present in low-flow channel. Surface relief is present and the bed has surface soil cracks in the low-flow channel.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b><u>Floodplain unit:</u></b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

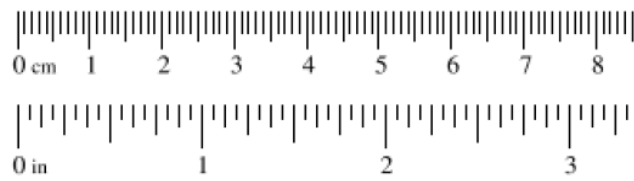
<b><u>Floodplain unit:</u></b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 201-7		<b>Feature ID:</b> D201-7		<b>Date:</b> 9/10/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, T. Kayatsky, P. Ferral					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.432792, -120.28113			
<b>Potential anthropogenic influences on the channel system:</b> Ephemeral drainage adjacent to Highway.					
<b>Brief site description:</b> Low gradient ephemeral stream, OHWM and TOB are the same.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

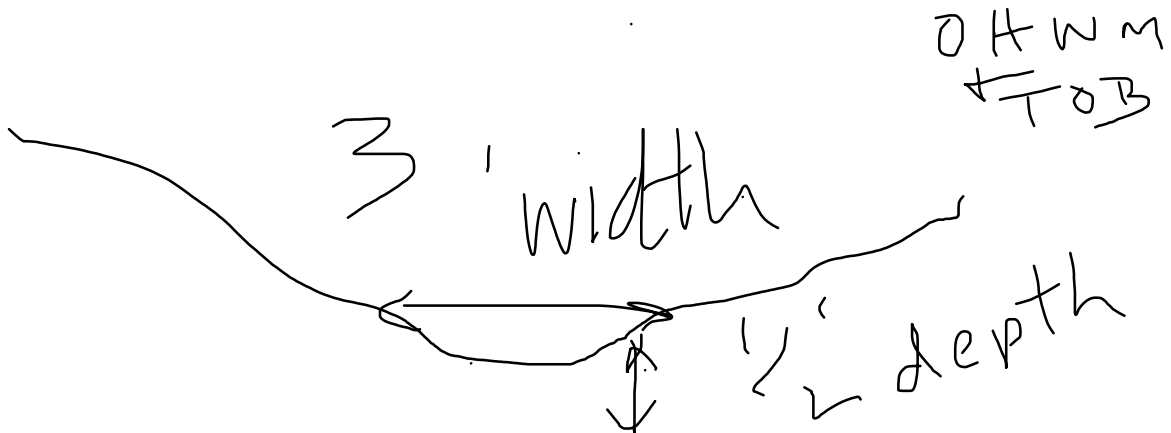


Feature ID: D201-7

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

## Indicators:

- ☒ Change in average sediment texture  
☐ Change in vegetation species  
☒ Change in vegetation cover

- ☒ Break in bank slope  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

## Comments:

Bed and bank feature. OHWM evidenced by change in sediment texture, gentle break in bank slope, and change in vegetation cover. Smpling point documents an ephemeral stream.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

## Characteristics of the floodplain unit:

Average sediment texture: boulders and cobblesTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 10 %

Community successional stage:

- ☐ NA ☐ Mid (herbaceous, shrubs, saplings)  
☒ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

## Indicators:

- ☐ Mudcracks ☐ Soil development  
☐ Ripples ☒ Surface relief  
☐ Drift and/or debris ☒ Other: Surface soil cracks  
☒ Presence of bed and bank ☐ Other: \_\_\_\_\_  
☐ Benches ☐ Other: \_\_\_\_\_

## Comments:

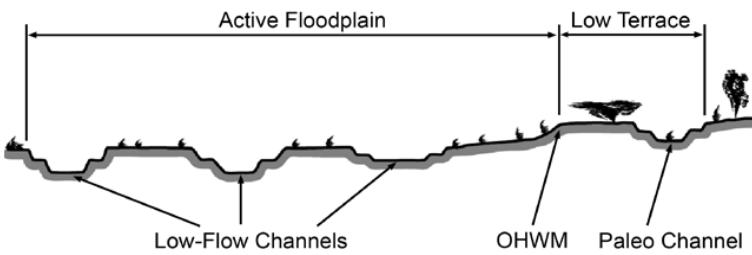
No water present in low-flow channel. Surface relief is present and the bed has surface soil cracks in the low-flow channel.



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

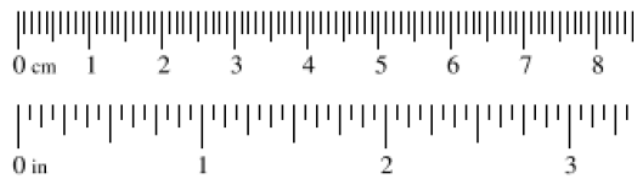
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 202-7		<b>Feature ID:</b> D202-7		<b>Date:</b> 9/10/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, T. Kayatsky, P. Ferral					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.43130, -120.28145			
<b>Potential anthropogenic influences on the channel system:</b> Ephemeral drainage adjacent to Highway.					
<b>Brief site description:</b> Low gradient ephemeral drainage. OHWM and TOB are the same.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> </li> </ol>					
		<input checked="" type="checkbox"/> GPS <input type="checkbox"/> Other:			

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

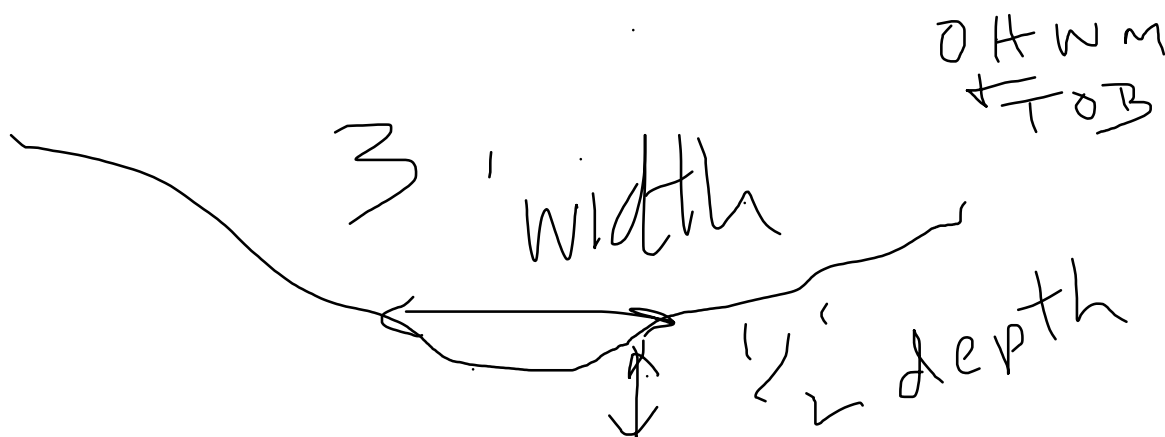


Feature ID: D202-7

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

## Indicators:



Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

## Comments:

Bed and bank feature. OHWM evidenced by change in sediment texture, gentle break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

## Characteristics of the floodplain unit:

Average sediment texture: Cobbles and bouldersTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 10 %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

## Indicators:



Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief

Other: Surface soil cracks

Other: \_\_\_\_\_



Other: \_\_\_\_\_

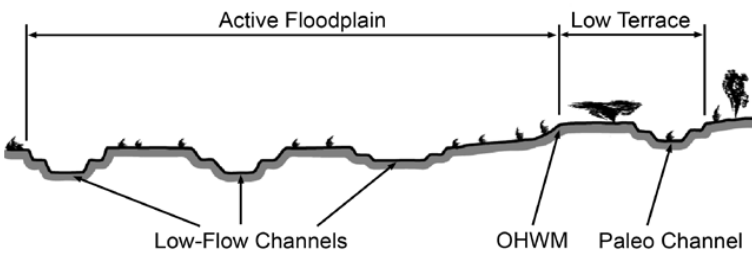
## Comments:

No water present in low-flow channel. Surface relief is present and the bed has surface soil cracks in the low-flow channel.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b><u>Floodplain unit:</u></b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

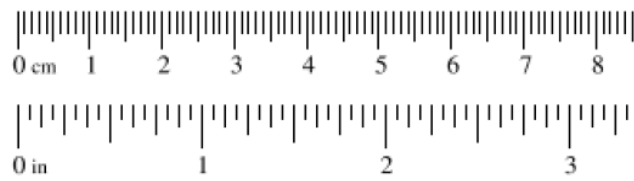
<b><u>Floodplain unit:</u></b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 203-7		<b>Feature ID:</b> D203-7		<b>Date:</b> 9/11/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, T. Kayatsky, P. Ferral					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.43481, -120.28076			
<b>Potential anthropogenic influences on the channel system:</b> Ephemeral drainage adjacent to Highway.					
<b>Brief site description:</b> Small ephemeral stream at C203-7. OHWM and TOB are the same.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

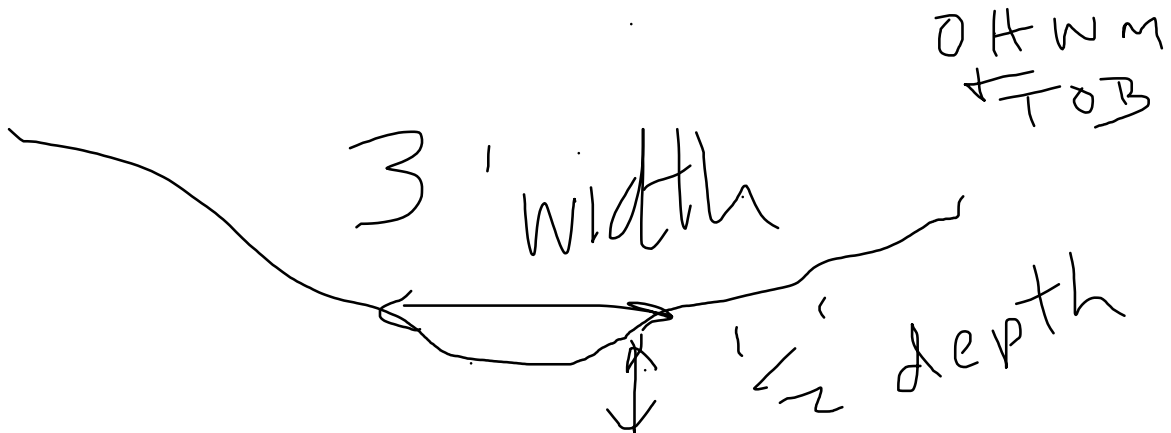


Feature ID: D203-7

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

## Indicators:

- ☒ Change in average sediment texture  
☐ Change in vegetation species  
☒ Change in vegetation cover

- ☒ Break in bank slope  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

## Comments:

Bed and bank feature. OHWM evidenced by change in sediment texture, gentle break in slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

Floodplain unit:☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

## Characteristics of the floodplain unit:

Average sediment texture: cobbles and sandTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 10 %

Community successional stage:

- ☐ NA ☐ Mid (herbaceous, shrubs, saplings)  
☒ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

## Indicators:

- ☐ Mudcracks ☐ Soil development  
☐ Ripples ☒ Surface relief  
☐ Drift and/or debris ☒ Other: Surface soil cracks  
☒ Presence of bed and bank ☐ Other: \_\_\_\_\_  
☐ Benches ☐ Other: \_\_\_\_\_

## Comments:

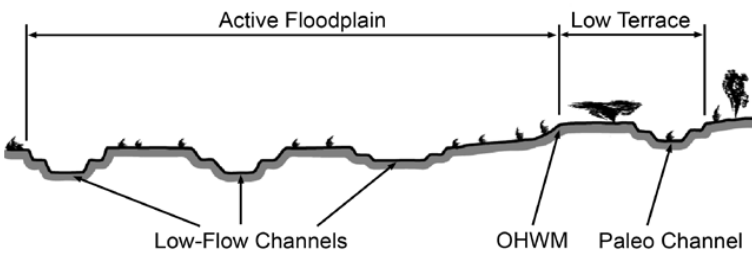
No water present in low-flow channel. Surface relief is present and the bed has surface soil cracks in the low-flow channel.



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

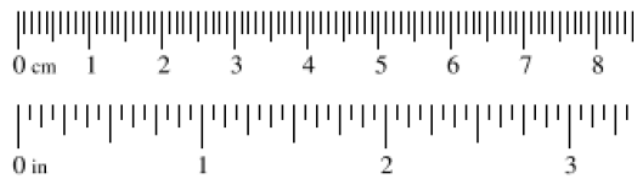
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 204-7		<b>Feature ID:</b> D204-7		<b>Date:</b> 9/11/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, T. Kayatsky, P. Ferral					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 42.43721, -120.28017			
<b>Potential anthropogenic influences on the channel system:</b> Ephemeral drainage adjacent to Highway.					
<b>Brief site description:</b> Short ephemeral stream at C204-7, loses OHWM indicators at approximately 29'. OHWM and TOB are the same.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

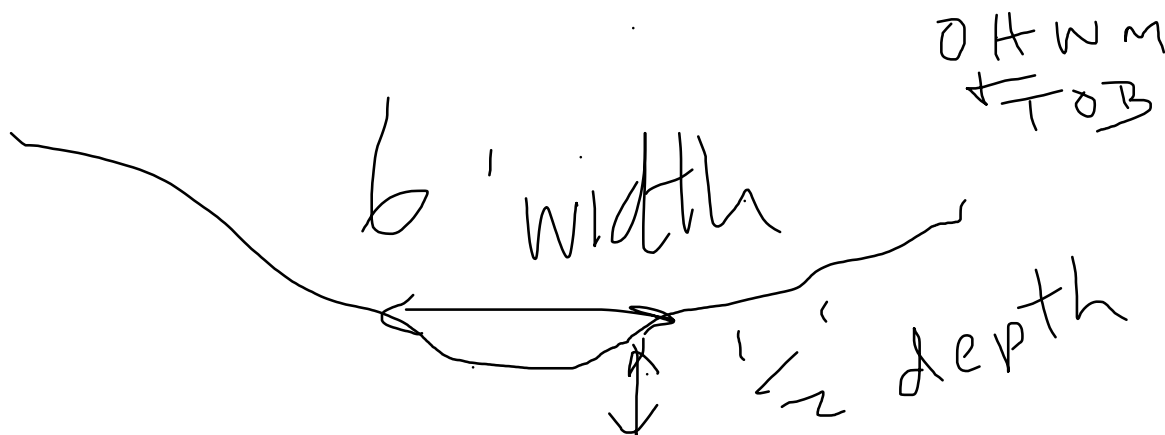


Feature ID: D204-7

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

## Indicators:



Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

## Comments:

Bed and bank feature. OHWM evidenced by gentle break in bank slope, some sediment change rocky bed, and change in vegetation cover.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

## Characteristics of the floodplain unit:

Average sediment texture: sand, cobbles, pebbles gravel

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 5 %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

## Indicators:



Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: Surface soil cracks



Other: \_\_\_\_\_



Other: \_\_\_\_\_

## Comments:

No water present in low-flow channel. Surface relief is present and the bed has surface soil cracks in the low-flow channel.

Feature ID:

Cross section ID:

Date:

Time:

Floodplain unit:

☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Mid (herbaceous, shrubs, saplings)

☐

Early (herbaceous & seedlings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐

Mudcracks

☐

Soil development

☐

Ripples

☐

Surface relief

☐

Drift and/or debris

☐

Other: \_\_\_\_\_

☐

Presence of bed and bank

☐

Other: \_\_\_\_\_

☐

Benches

☐

Other: \_\_\_\_\_

**Comments:**

Floodplain unit:

☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Mid (herbaceous, shrubs, saplings)

☐

Early (herbaceous & seedlings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐

Mudcracks

☐

Soil development

☐

Ripples

☐

Surface relief

☐

Drift and/or debris

☐

Other: \_\_\_\_\_

☐

Presence of bed and bank

☐

Other: \_\_\_\_\_

☐

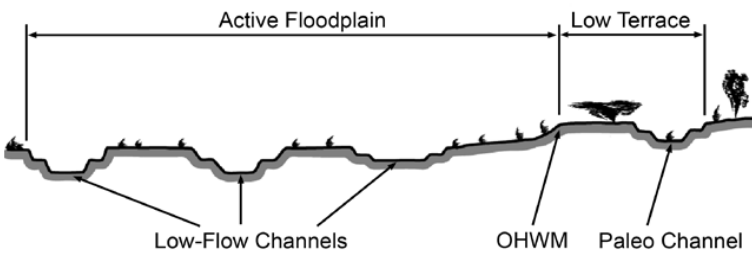
Benches

☐

Other: \_\_\_\_\_

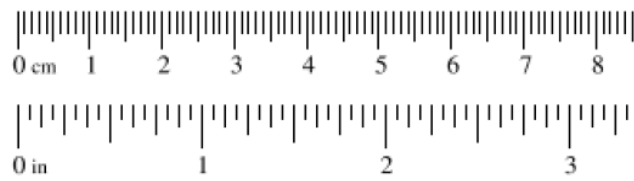
**Comments:**

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 205-7		<b>Feature ID:</b> D205-7		<b>Date:</b> 9/11/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, T. Kayatsky, P. Ferral					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.44176, -120.27921			
<b>Potential anthropogenic influences on the channel system:</b> Ephemeral drainage adjacent to Highway.					
<b>Brief site description:</b> Ephemeral drainage under railroad access bridge. OHWM and TOB are the same.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

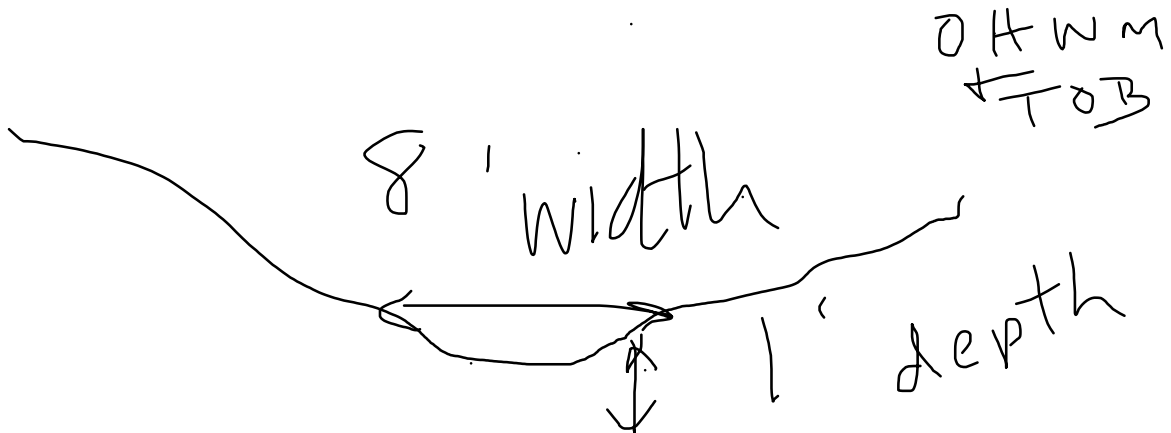


Feature ID: D205-7

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

## Indicators:

- ☒ Change in average sediment texture  
☐ Change in vegetation species  
☒ Change in vegetation cover

- ☒ Break in bank slope  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

## Comments:

Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

## Characteristics of the floodplain unit:

Average sediment texture: Cobbles, pebbles, sand,Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 20 %

Community successional stage:

- ☐ NA ☐ Mid (herbaceous, shrubs, saplings)  
☒ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

## Indicators:

- ☐ Mudcracks ☒ Soil development  
☐ Ripples ☒ Surface relief  
☐ Drift and/or debris ☒ Other: Surface soil cracks  
☒ Presence of bed and bank ☐ Other: \_\_\_\_\_  
☐ Benches ☐ Other: \_\_\_\_\_

## Comments:

No water present in low-flow channel. Surface relief is present and the bed has surface soil cracks in the low-flow channel.



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Sampling Point: SP 02-7

Feature ID: W01-7

Project/Site: Zayo Fiberoptic Interconnect Project, Group #7

City/County: Lassen County

Sampling Date: 8/28/2019

Applicant/Owner: Zayo Group

State: California

Investigator(s): T. Kayatsky, P. Ferral

Section, Township, Range: S10, T30N, R15E

Local relief (hillside, terrace, etc.): Flat

Local Relief (concave, convex, none): None

Slope (%): 0

Subregion (LRR): D

Lat: 40.47429

Long: -120.27498

Datum: NAD83

Soil Map Unit Name: (335) Ravendale silty clay, 0 to 2 percent slopes, Hydric

NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? ☐ No Are "Normal Circumstances" present? Yes ☒ No ☐Are Vegetation ☐ No, Soil ☒ Yes, or Hydrology ☐ No naturally problematic? ☒ Yes (If needed, explain any answers in Remarks.)**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**Hydrophytic Vegetation Present? Yes ☒ No ☐Hydric Soil Present? Yes ☒ No ☐Wetland Hydrology Present? Yes ☒ No ☐Is the Sampled Area  
within a Wetland?Yes ☒ No ☐

**Remarks:** Wetland parameters present in sample point indicated by a dominance of hydrophytic vegetation, primary a hydrology indicator of surface soil cracks indicating recent inundation. Soils meet criteria for problematic hydric soils in seasonally ponded area functioning as a wetland.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: _____)				
1				
2				
3				
4				
5				
		0	= Total Cover	

Herb Stratum	(Plot size: 5' radius )			
1 Ludpal	Ludwigia palustris	25	YES	OBL
2 Rumsal	Rumex salicifolius	5	NO	FACW
3 Helcus	Helianthus cusickii	5	NO	UPL
4 Lacser	Lactuca serriola	2	NO	FACU
5				
6				
7				
8				
9				
10				
11				
		37	= Total Cover	

Woody Vine Stratum	(Plot size: _____)	_____	_____	_____	_____
1	_____	_____	_____	_____	_____
2	_____	_____	_____	_____	_____
		0	=	Total Cover	

%Bare Ground in Herb

% Cover of Biotic

Stratum: 50

Crust: 0

**Dominance Test worksheet:**

Number of Dominant Species

That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant

Species Across All Strata: 1 (B)

Percent of Dominant Species

That Are OBL, FACW, or FAC: 100% (A/B)

**Prevalence Index worksheet:**

Total % Cover of: Multiply by:

OBL species 25 x 1 = 25

FACW species 5 x 2 = 10

FAC species 0 x 3 = 0

FACU species 2 x 4 = 8

UPL species 5 x 5 = 25

Column Totals: 37 (A) 68 (B)

Prevalence Index = B/A = 1.8378

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is &gt;50%

Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)5 - Wetland Non-Vascular Plants<sup>1</sup>6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic  
Vegetation**

Present?

Yes ☒ No ☐**Remarks:** Dominance of hydrophytic vegetation observed.

SOIL							Sampling Point: SP 02-7	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	7.5YR 4/2	100					Silt	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input checked="" type="checkbox"/> Other (Explain in Remarks)		
						<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: <u>None</u> Depth (inches): <u>NA</u>						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Soil naturally problematic as chroma is low and possibly masks redox features in dry season. Seasonally ponded soils often lack indicators due to limited saturation depth. Dominance of hydric vegetation and wetland hydrology indicators present; site functions as a wetland.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input checked="" type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>NA</u> Water Table Present?     Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>NA</u> Saturation Present?       Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>NA</u> (includes capillary fringe)						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Primary hydrology indicator of surface soil cracks observed. Also, one secondary indicator was observed (dominant species pass FAC-neutral test).								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Sampling Point: SP 03-7

Feature ID: U01-7

Project/Site: Zayo Fiberoptic Interconnect Project, Group #7

City/County: Lassen County

Sampling Date: 8/28/2019

Applicant/Owner: Zayo Group

State: California

Investigator(s): T. Kayatsky, P. Ferral

Section, Township, Range: S10,T30N, R15E

Local relief (hillside, terrace, etc.): Flat

Local Relief (concave, convex, none): None

Slope (%): 1

Subregion (LRR): D

Lat: 40.47427

Long: -120.27495

Datum: NAD83

Soil Map Unit Name: (335) Ravendale silty clay, 0 to 2 percent slopes, Hydric

NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? ☐ No Are "Normal Circumstances" present? Yes ☒ No ☐Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? ☐ No (If needed, explain any answers in Remarks.)**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**Hydrophytic Vegetation Present? Yes ☐ No ☒Hydric Soil Present? Yes ☐ No ☒Wetland Hydrology Present? Yes ☐ No ☒Is the Sampled Area  
within a Wetland?Yes ☐ No ☒**Remarks:** Sample confirmed as upland along gentle slope where all three parameters are absent; upland pair point to W01-7.**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)				
1 Arttri	Artemisia tridentata	30	YES	UPL
2				
3				
4				
5				
		30	= Total Cover	

Herb Stratum (Plot size: 5' radius)				
1 Tartan	Taraxia tanacetifolia	60	YES	FACU
2 Brotec	Bromus tectorum	10	NO	UPL
3				
4				
5				
6				
7				
8				
9				
10				
11				
		70	= Total Cover	

Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

%Bare Ground in Herb

% Cover of Biotic

Stratum: 30

Crust: 0

**Dominance Test worksheet:**

Number of Dominant Species

That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant

Species Across All Strata: 2 (B)

Percent of Dominant Species

That Are OBL, FACW, or FAC: 0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of: Multiply by:

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 60 x 4 = 240

UPL species 40 x 5 = 200

Column Totals: 100 (A) 440 (B)

Prevalence Index = B/A = 4.4

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is &gt;50%

No 3 - Prevalence Index is ≤3.0<sup>1</sup>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)5 - Wetland Non-Vascular Plants<sup>1</sup>6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.**Hydrophytic  
Vegetation**

Present?

Yes ☐ No ☒**Remarks:** Hydrophytic vegetation not observed.

<b>SOIL</b>				Sampling Point:    SP 03-7			
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>		
0-11	10YR 4/3	100				Silt	No redox
11-16	7.5YR 4/2	100				Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.     
 <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

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**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	

**Indicators for Problematic Hydric Soils<sup>3</sup>:**
☐ 1 cm Muck (A9) (**LRR C**)  
☐ 2 cm Muck (A10) (**LRR B**)  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (TF2)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

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**Restrictive Layer (if present):**  
 Type: None  
 Depth (inches): NA

**Hydric Soil Present?**  
  
 Yes ☐ No ☒

Remarks: Hydric soil indicators not observed.

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### HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)		
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)		
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)		
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)		
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)		

**Secondary Indicators (2 or more required)**
☐ Water Marks (B1) (**Riverine**)  
☐ Sediment Deposits (B2) (**Riverine**)  
☐ Drift Deposits (B3) (**Riverine**)  
☐ Drainage Patterns (B10)  
☐ Dry-Season Water Table (C2)  
☐ Crayfish Burrows (C8)  
☐ Saturation Visible on Aerial Imagery (C9)  
☐ Shallow Aquitard (D3)  
☐ FAC-Neutral Test (D5)

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**Field Observations:**

Surface Water Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <span style="float: right;">NA</span>
Water Table Present?        Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <span style="float: right;">NA</span>
Saturation Present?          Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (includes capillary fringe)	Depth (inches): <span style="float: right;">NA</span>

**Wetland Hydrology Present?**  
  
 Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

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Remarks: Hydrology indicators not observed.

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #7 City/County: Lassen County Sampling Date: 8/13/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: SP 2-7 Feature ID: W1-7  
 Investigator(s): M. Oats, J. Ahn Section, Township, Range: S35, T32N, R15E  
 Local relief (hillside, terrace, etc.): Terrace Local Relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): D Lat: 40.59286 Long: -120.24807 Datum: NAD83  
 Soil Map Unit Name: (363) Smocreek silty clay loam, 0 to 2 percent slopes NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? ☐ Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? ☐ (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☒ No ☐  
 Hydric Soil Present? Yes ☒ No ☐  
 Wetland Hydrology Present? Yes ☒ No ☐

Is the Sampled Area within a Wetland? Yes ☒ No ☐

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour: \_\_\_\_\_ OHWM Mapped: \_\_\_\_\_  
 Feature Designation: Perennial: \_\_\_\_\_ Intermittent: \_\_\_\_\_ Ephemeral: \_\_\_\_\_  
 Natural Drainage: \_\_\_\_\_ Artificial Drainage: \_\_\_\_\_ Navigable Water: \_\_\_\_\_

**Remarks:** Wetland parameters are present as indicated by both primary and secondary hydrology indicators, hydric soil indicators (F6), and a dominance of hydrophytic vegetation.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: _____)				
1				
2				
3				
4				
5				
		0		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5 foot radii)				
1 Schacu	Schoenoplectus acutus	35	YES	OBL
2 Verame	Veronica americana	10	NO	OBL
3 Junbal	Juncus balticus	40	YES	FACW
4				
5				
6				
7				
8				
9				
10				
11				
		85		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: _____)				
1				
2				
		0		= Total Cover

% Bare Ground in Herb 15 % Cover of Biotic \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species 45	x 1 =	45
FACW species 40	x 2 =	80
FAC species 0	x 3 =	0
FACU species 0	x 4 =	0
UPL species 0	x 5 =	0
Column Totals: 85	(A)	125 (B)
Prevalence Index = B/A =		1.4706

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation  
 Yes 2 - Dominance Test is >50%  
 Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☒ No ☐

**Remarks:** Hydrophytic vegetation present as indicated by a dominance of OBL and FACW species.

SOIL							Sampling Point: SP 2-7	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10 YR 4/1	100					Sandy clay loam	Mucky mottled mineral
8-16	10 YR 4/1	95	5 YR 4/4	5	C	M	Loamy clay	Prominent redox concentrations
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>					
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )					
<input type="checkbox"/> Black Histic (A3)	<input checked="" type="checkbox"/> Loamy Mucky Mineral (F1)		<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )					
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Reduced Vertic (F18)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )	<input checked="" type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Red Parent Material (TF2)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )	<input type="checkbox"/> Redox Dark Surface (F6)		<input type="checkbox"/> Other (Explain in Remarks)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)							
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>			<b>Hydric Soil Present?</b>					
Type: <input type="text" value="None"/>			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Depth (inches): <input type="text" value="None"/>								
<b>Remarks:</b> Prominent redox concentrations occurring as soft masses below 8 inches were observed. Indicator F1 (Loamy Mucky Mineral) met with a loamy mucky mineral layer at least 4 inches thick starting in the top 6 inches of soil surface.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>			<b>Secondary Indicators (2 or more required)</b>					
Primary Indicators (minimum of one required; check all that apply)								
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )					
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )					
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )					
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)					
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)					
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)					
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)					
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)					
<b>Field Observations:</b>			<b>Wetland Hydrology Present?</b>					
Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <input type="text" value="0"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <input type="text" value="0"/>						
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <input type="text" value="0"/>						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicators present as evidenced by the presence of surface water, saturation, and high water table, and by secondary indicators of saturation visible on aerial and dominant species present pass FAC-neutral test.								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #7 City/County: Lassen County Sampling Date: 8/13/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: SP 3-7 Feature ID: U1-7  
 Investigator(s): M. Oats, J. Ahn Section, Township, Range: S35, T32N, R15E  
 Local relief (hillside, terrace, etc.): bank slope Local Relief (concave, convex, none): None Slope (%): 8  
 Subregion (LRR): D Lat: 40.59283 Long: -120.24803 Datum: NAD83  
 Soil Map Unit Name: (363) Smocreek silty clay loam, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☐ No ☒  
 Hydric Soil Present? Yes ☒ No ☐  
 Wetland Hydrology Present? Yes ☐ No ☒

Is the Sampled Area within a Wetland? Yes ☐ No ☒

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour \_\_\_\_\_ OHWM Mapped \_\_\_\_\_  
 Feature Designation: Perennial \_\_\_\_\_ Intermittent \_\_\_\_\_ Ephemeral \_\_\_\_\_  
 Natural Drainage \_\_\_\_\_ Artificial Drainage \_\_\_\_\_ Navigable Water \_\_\_\_\_

**Remarks:** Sample confirmed as upland along slope where indicators of wetland hydrology and a dominance of hydrophytic vegetation is absent. Likely that hydric soils are consistent in this transition boundary from wetland. Upland pair point to W1-7.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)				
1				
2				
3				
4				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: 15' radius)				
1		10		
2		40		
3				
4				
5				
		50	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5' radius)				
1	Artdou Artemisia douglasiana	5	YES	FAC
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		5	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

% Bare Ground in Herb 95 % Cover of Biotic \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species	0 x 1 =	0
FACW species	0 x 2 =	0
FAC species	5 x 3 =	15
FACU species	0 x 4 =	0
UPL species	0 x 5 =	0
Column Totals:	5 (A)	15 (B)
Prevalence Index = B/A =		3

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation  
 Yes 2 - Dominance Test is >50%  
 Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☐ No ☒

**Remarks:** Sample point dominated by upland vegetation.



SOIL						Sampling Point: SP 3-7		
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10 YR 2/1	60	10 YR 3/2	35	C	M	Sandy loam	Faint redox concentrations
			10 YR 5/6	5	C	M	Sandy loam	Prominent redox concentrations
6-16	10 YR 5/1						Sandy loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input checked="" type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input checked="" type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: <u>None</u>						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Depth (inches): <u>NA</u>								
<b>Remarks:</b> Multiple indicators of hydric soil are met including Redox dark surface (F6) indicated by prominent redox concentrations occurring as soft masses in a layer at least 4 inches thick starting in the upper 8 inches of mineral soil.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>          </u>		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Water Table Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>          </u>					
Saturation Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>          </u>					
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group # 7 City/County: Lassen County Sampling Date: 8/13/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: SP 4-7 Feature ID: W2-7  
 Investigator(s): M. Oats, J. Ahn Section, Township, Range: S35, T32N, R15E  
 Local relief (hillside, terrace, etc.): Terrace Local Relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): D Lat: 40.59245 Long: -120.24848 Datum: NAD83  
 Soil Map Unit Name: (363) Smocreek silty clay loam, 0 to 2 percent slopes NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? ☐ Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? ☐ (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☒ No ☐  
 Hydric Soil Present? Yes ☒ No ☐  
 Wetland Hydrology Present? Yes ☒ No ☐

Is the Sampled Area within a Wetland? Yes ☒ No ☐

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour: \_\_\_\_\_ OHWM Mapped: \_\_\_\_\_  
 Feature Designation: Perennial: \_\_\_\_\_ Intermittent: \_\_\_\_\_ Ephemeral: \_\_\_\_\_  
 Natural Drainage: \_\_\_\_\_ Artificial Drainage: \_\_\_\_\_ Navigable Water: \_\_\_\_\_

Remarks: Wetland parameters are present as a riparian stinger indicated by hydrology indicators, hydric soil indicators (F3), and a dominance of hydrophytic vegetation.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)				
1				
2				
3				
4				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: 15' radius)				
1	Salexi Salix exigua	70	YES	FACW
2				
3				
4				
5				
		70	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5' radius)				
1	Carneb Carex nebrascensis	20	YES	OBL
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		20	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

% Bare Ground in Herb 80 % Cover of Biotic \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species 20	x 1 =	20
FACW species 70	x 2 =	140
FAC species 0	x 3 =	0
FACU species 0	x 4 =	0
UPL species 0	x 5 =	0
Column Totals: 90	(A)	160 (B)
Prevalence Index = B/A =		1.7778

**Hydrophytic Vegetation Indicators:**

- 1 - Rapid Test for Hydrophytic Vegetation
- Yes 2 - Dominance Test is >50%
- Yes 3 - Prevalence Index is  $\leq 3.0^1$
- 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants<sup>1</sup>
- 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☒ No ☐

Remarks: Hydrophytic vegetation present as indicated by a dominance of OBL and FACW species.

SOIL							Sampling Point: SP 4-7	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 4/1	95	10 YR 5/6	5	C	M	Loamy clay	Prominent redox concentrations
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>					
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )					
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )					
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Reduced Vertic (F18)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )	<input checked="" type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Red Parent Material (TF2)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )	<input type="checkbox"/> Redox Dark Surface (F6)		<input type="checkbox"/> Other (Explain in Remarks)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)							
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b>							<b>Hydric Soil Present?</b>	
Type: <input type="text"/>	None						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Depth (inches): <input type="text"/>	NA							
<b>Remarks:</b> Hydric soil indicator (F3) Depleted Matrix met by prominent redox concentrations occurring as soft masses in a depleted matrix at least 6 inches thick starting in the top 10 inches of soil surface.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>							<b>Secondary Indicators (2 or more required)</b>	
Primary Indicators (minimum of one required; check all that apply)							<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)						<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)						<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)						<input checked="" type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)						<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)						<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)						<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)						<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)						<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)							
<b>Field Observations:</b>							<b>Wetland Hydrology Present?</b>	
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <input type="text"/>		0				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <input type="text"/>		0					
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <input type="text"/>		0					
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Primary hydrology indicators present as evidenced by the presence of surface water, saturation, and high water table, as well as secondary indicators of drainage patterns and dominant species pass FAC-neutral test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #7 City/County: Lassen County Sampling Date: 8/13/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: SP 5-7 Feature ID: U2-7  
 Investigator(s): M. Oats, J. Ahn Section, Township, Range: S35, T32N, R15E  
 Local relief (hillside, terrace, etc.): bank slope (roadside) Local Relief (concave, convex, none): None Slope (%): 15  
 Subregion (LRR): D Lat: 40.59244 Long: -120.24849 Datum: NAD83  
 Soil Map Unit Name: (363) Smocreek silty clay loam, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No ☐  
 Hydric Soil Present? Yes ☐ No ☒  
 Wetland Hydrology Present? Yes ☐ No ☒

Is the Sampled Area within a Wetland? Yes ☐ No ☒

## Evaluation of features designated "Other Waters"

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour \_\_\_\_\_ OHWM Mapped \_\_\_\_\_  
 Feature Designation: Perennial \_\_\_\_\_ Intermittent \_\_\_\_\_ Ephemeral \_\_\_\_\_  
 Natural Drainage \_\_\_\_\_ Artificial Drainage \_\_\_\_\_ Navigable Water \_\_\_\_\_

Remarks: Confirmed as upland along topographic slope where hydric soil indicators and wetland hydrology indicators are absent. Salix species encroaching upslope where conditions are less likely to remain inundated; upland pair point to W2.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)				
1				
2				
3				
4				
		0		= Total Cover

Sapling/Shrub Stratum (Plot size: 15' radius)				
1	Salexi Salix exigua	10	YES	FACW
2				
3				
4				
5				
		10		= Total Cover

Herb Stratum (Plot size: 5' radius)				
1	Cirarv Cirsium arvense	5	YES	FACU
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		5		= Total Cover

Woody Vine Stratum (Plot size: _____)				
1				
2				
		0		= Total Cover

% Bare Ground in Herb 95 % Cover of Biotic \_\_\_\_\_

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.5 (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>10</u>	x 2 = <u>20</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>5</u>	x 4 = <u>20</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>15</u> (A)	<u>40</u> (B)
Prevalence Index = B/A = <u>2.6667</u>	

## Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- No 2 - Dominance Test is >50%
- Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants<sup>1</sup>
- 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## Hydrophytic Vegetation Present?

Yes ☒ No ☐

Remarks: Sample passes prevalence index for hydrophytic vegetation. Herb stratum is dominated by weedy FACU species.

SOIL							Sampling Point:	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								SP 5-7
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 3/2	80					Sandy loam	No redox
	10 YR 5/2	20						
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>				
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )				
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )				
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)				
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )	<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)				
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )	<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b>				<b>Hydric Soil Present?</b>				
Type:	None			Yes <input type="checkbox"/>				
Depth (Inches):	NA			No <input checked="" type="checkbox"/>				
<b>Remarks:</b> Soil pit lacks hydric soil indicators. Insufficient quantity of depeleted matrix within layer to meet any indicator. It is likely that the area receives flows but does not remain frequently flooded.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>				
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )				
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )				
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )				
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (CS)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)				
<b>Field Observations:</b>				<b>Wetland Hydrology Present?</b>				
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): NA			Yes <input type="checkbox"/>				
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): NA			No <input checked="" type="checkbox"/>				
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (includes capillary fringe)	Depth (inches): NA							
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #7 City/County: Lassen County Sampling Date: 8/13/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: SP 6-7 Feature ID: W3-7  
 Investigator(s): M. Oats, J. Ahn Section, Township, Range: S26, T32N, R15E  
 Local relief (hillside, terrace, etc.): Terrace Local Relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): D Lat: 40.60356 Long: -120.24711 Datum: NAD83  
 Soil Map Unit Name: (348) Saddlerock silty clay, 0 to 2 percent slopes NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? ☐ Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? ☐ (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☒ No ☐  
 Hydric Soil Present? Yes ☒ No ☐  
 Wetland Hydrology Present? Yes ☒ No ☐

Is the Sampled Area within a Wetland? Yes ☒ No ☐

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour: \_\_\_\_\_ OHWM Mapped: \_\_\_\_\_  
 Feature Designation: Perennial: \_\_\_\_\_ Intermittent: \_\_\_\_\_ Ephemeral: \_\_\_\_\_  
 Natural Drainage: \_\_\_\_\_ Artificial Drainage: \_\_\_\_\_ Navigable Water: \_\_\_\_\_

Remarks: Wetland parameters are present in feature as indicated by primary and secondary hydrology indicators, hydric soil indicator (F6), and a dominance of hydrophytic vegetation.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: _____)				
1		70		
2				
3				
4				
5				
		70		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5' radius)				
1	Carneb	60	YES	OBL
2	Menarv	25	YES	FACW
3	Rumcrl	5	NO	FAC
4	Cirarv	2	NO	FACU
5	Equlae	5	NO	FACW
6				
7				
8				
9				
10				
11				
		97		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: _____)				
1				
2				
		0		= Total Cover

% Bare Ground in Herb  3 % Cover of Biotic

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC:  2 (A)

Total Number of Dominant Species Across All Strata:  2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC:  1 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species	60 x 1 =	60
FACW species	30 x 2 =	60
FAC species	5 x 3 =	15
FACU species	2 x 4 =	8
UPL species	0 x 5 =	0
Column Totals:	97 (A)	143 (B)
Prevalence Index = B/A =		1.4742

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation  
 Yes 2 - Dominance Test is >50%  
 Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☒ No ☐

Remarks: Dominance of hydrophytic vegetation (OBL and FACW species) present.

SOIL		Sampling Point: SP 6-7						
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix	Redox Features				Texture	Remarks	
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			Loc <sup>2</sup>
0-6	10 YR 2/2	95	10 YR 5/6	5	C	M	Loamy clay	Prominent redox concentrations
6-16	10 YR 2/2	80	5 YR 5/4	20	C	M	Loamy clay	Prominent redox concentrations
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>						
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )						
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )						
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Reduced Vertic (F18)						
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Red Parent Material (TF2)						
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)						
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)							
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b>				<b>Hydric Soil Present?</b>				
Type: <input type="text"/> None				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Depth (inches): <input type="text"/> None								
<b>Remarks:</b> Hydric soil indicator (F6) Redox Dark Surface, is met by at least 5% prominent redox concentrations occurring as soft masses in a layer at least 6 inches thick starting in the top 10 inches of soil surface.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>				
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )						
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )						
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input checked="" type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )						
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)						
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)						
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)						
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)						
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)						
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)						
<b>Field Observations:</b>				<b>Wetland Hydrology Present?</b>				
Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<input type="text"/> 0					
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<input type="text"/> 8					
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<input type="text"/> 1					
(includes capillary fringe)				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicators present as evidenced by the presence of saturation, and high water table, as well as by secondary indicators of drainage patterns and dominant species pass the FAC-neutral test.								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #7 City/County: Lassen County Sampling Date: 8/13/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: SP 7-7 Feature ID: U3-7  
 Investigator(s): M. Oats, J. Ahn Section, Township, Range: S26, T32N, R15E  
 Local relief (hillside, terrace, etc.): Roadside shoulder Local Relief (concave, convex, none): None Slope (%): 8  
 Subregion (LRR): D Lat: 40.60354 Long: -120.24725 Datum: NAD83  
 Soil Map Unit Name: (348) Saddlerock silty clay, 0 to 2 percent slopes NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? ☐ Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? ☐ (If needed, explain any answers in Remarks.)  
**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☐ No ☒  
 Hydric Soil Present? Yes ☐ No ☒  
 Wetland Hydrology Present? Yes ☐ No ☒

Is the Sampled Area within a Wetland? Yes ☐ No ☒

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour: \_\_\_\_\_ OHWM Mapped: \_\_\_\_\_  
 Feature Designation: Perennial: \_\_\_\_\_ Intermittent: \_\_\_\_\_ Ephemeral: \_\_\_\_\_  
 Natural Drainage: \_\_\_\_\_ Artificial Drainage: \_\_\_\_\_ Navigable Water: \_\_\_\_\_

Remarks: Confirmed as upland along topographic slope where indicators of all three parameters are absent; upland pair point to W3-7.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)				
1				
2				
3				
4				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: 15' radius)				
1	Erinau Ericameria nauseosa	10	YES	UPL
2				
3				
4				
5				
		10	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5' radius)				
1	Equlae Equisetum laevigatum	10	YES	FACW
2	Tradub Tragopogon dubius	10	YES	UPL
3	Unkgra Unknown grass	30	YES	FAC
4				
5				
6				
7				
8				
9				
10				
11				
		50	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

% Bare Ground in Herb 50 % Cover of Biotic \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.5 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species 0	x 1 =	0
FACW species 10	x 2 =	20
FAC species 30	x 3 =	90
FACU species 0	x 4 =	0
UPL species 20	x 5 =	100
Column Totals: 60	(A)	210 (B)
Prevalence Index = B/A =		3.5

**Hydrophytic Vegetation Indicators:**

- 1 - Rapid Test for Hydrophytic Vegetation
- No 2 - Dominance Test is >50%
- No 3 - Prevalence Index is ≤3.0<sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants<sup>1</sup>
- 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☐ No ☒

Remarks: Sample point does not contain a dominance of hydrophytic vegetation as site is dominated by mix of UPL, FACW and FAC vegetation.



SOIL							Sampling Point: SP 7-7	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10 YR 4/4	100					Sandy loam	Roadfill
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)				<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>	
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)				<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )	
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)				<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )	
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)				<input type="checkbox"/> Reduced Vertic (F18)	
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)				<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)				<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
							<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: Roadfill						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Depth (inches): 4								
<b>Remarks:</b> Soil point lacks hydric soil indicators. Soil pit taken at wetland boundary where roadshoulder abuts wetland, and therefore the soil has roadside fill.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)						Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	NA		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	NA				
Saturation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	NA				
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #7 City/County: Lassen County Sampling Date: 8/14/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: SP 11-7 Feature ID: W4-7a  
 Investigator(s): M. Oats, J. Ahn Section, Township, Range: S23, T32N, R15E  
 Local relief (hillside, terrace, etc.): Terrace Local Relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): D Lat: 40.62107 Long: -120.24652 Datum: NAD83  
 Soil Map Unit Name: (348) Saddlerock silty clay, 0 to 2 percent slopes NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☒ No ☐  
 Hydric Soil Present? Yes ☒ No ☐  
 Wetland Hydrology Present? Yes ☒ No ☐  
 Is the Sampled Area within a Wetland? Yes ☒ No ☐

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour: \_\_\_\_\_ OHWM Mapped: \_\_\_\_\_  
 Feature Designation: Perennial: \_\_\_\_\_ Intermittent: \_\_\_\_\_ Ephemeral: \_\_\_\_\_  
 Natural Drainage: \_\_\_\_\_ Artificial Drainage: \_\_\_\_\_ Navigable Water: \_\_\_\_\_

Remarks: Wetland parameters are present as indicated by primary and secondary hydrology indicators, hydric soil indicator (F3), and a dominance of hydrophytic vegetation.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)				
1				
2				
3				
4				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: 15' radius)				
1	Salexi Salix exigua	85	YES	FACW
2	Roswoo Rosa woodsii	10	NO	FACU
3				
4				
5				
		95	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5' radius)				
1	Poapra Poa pratensis	20	YES	FAC
2	Equlae Equisetum laevigatum	15	YES	FACW
3				
4				
5				
6				
7				
8				
9				
10				
11				
		35	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

% Bare Ground in Herb 65 % Cover of Biotic \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species  
 That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant  
 Species Across All Strata: 3 (B)

Percent of Dominant Species  
 That Are OBL, FACW, or FAC: 1 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species 0	x 1 =	0
FACW species 100	x 2 =	200
FAC species 20	x 3 =	60
FACU species 10	x 4 =	40
UPL species 0	x 5 =	0
Column Totals: 130 (A)		300 (B)
Prevalence Index = B/A =		2.3077

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation  
 Yes 2 - Dominance Test is >50%  
 Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☒ No ☐

Remarks: A dominance of hydrophytic vegetation is present (OBL and FACW species).

SOIL							Sampling Point: SP 11-7	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10 YR 2/2	100					Sandy clay loam	Prominent redox concentrations
4-16	10 YR 4/1	90	5 YR 5/6	10	C	M	Sandy clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>					
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )					
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )					
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Reduced Vertic (F18)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )	<input checked="" type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Red Parent Material (TF2)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )	<input type="checkbox"/> Redox Dark Surface (F6)		<input type="checkbox"/> Other (Explain in Remarks)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)							
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b>			<b>Hydric Soil Present?</b>					
Type:	None		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Depth (inches):	NA							
<b>Remarks:</b> Hydric soil indicator (F3) Depleted Matrix, met by s at least 6 inches thick starting in the top 10 inches of soil surface, with redox concentrations (soft masses or pore linings), in a matrix with a value of 4 or more and chroma of 2 or less.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>			<b>Secondary Indicators (2 or more required)</b>					
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )					
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )					
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )					
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input checked="" type="checkbox"/> Drainage Patterns (B10)					
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)					
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)					
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)					
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)					
<b>Field Observations:</b>			<b>Wetland Hydrology Present?</b>					
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	NA		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	NA				
Saturation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	NA				
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Primary ydrology indicator present as evidenced by the presence of oxidized rhizospheres along living roots, and by seondary indicators including drainage patterns and dominant species passed FAC-neutral test.								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #7 City/County: Lassen County Sampling Date: 8/14/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: SP 12-7 Feature ID: U4-7  
 Investigator(s): M.Oats, J. Ahn Section, Township, Range: S23, T32N, R15E  
 Local relief (hillside, terrace, etc.): Terrace Local Relief (concave, convex, none): Convex Slope (%): 2  
 Subregion (LRR): D Lat: 40.62109 Long: -120.24644 Datum: NAD83  
 Soil Map Unit Name: (348) Saddlerock silty clay, 0 to 2 percent slopes NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? ☐ Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? ☐ (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☐ No ☒  
 Hydric Soil Present? Yes ☐ No ☒  
 Wetland Hydrology Present? Yes ☐ No ☒

Is the Sampled Area within a Wetland? Yes ☐ No ☒

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour: \_\_\_\_\_ OHWM Mapped: \_\_\_\_\_  
 Feature Designation: Perennial: \_\_\_\_\_ Intermittent: \_\_\_\_\_ Ephemeral: \_\_\_\_\_  
 Natural Drainage: \_\_\_\_\_ Artificial Drainage: \_\_\_\_\_ Navigable Water: \_\_\_\_\_

Remarks: Sample confirmed as upland along slope where indicators of all three parameters are absent; upland pair point to W4-7.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)				
1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
1 Roswoo	Rosa woodsii	10	YES	FACU
2				
3				
4				
5				
		10	= Total Cover	

Herb Stratum (Plot size: 5' radius)	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
1 Koemac	Koeleria macrantha	35	YES	UPL
2 Tradub	Tragopogon dubius	25	YES	UPL
3 Leycin	Leymus cinereus	15	YES	FAC
4				
5				
6				
7				
8				
9				
10				
11				
		75	= Total Cover	

Woody Vine Stratum (Plot size: _____)	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
1				
2				
		0	= Total Cover	

% Bare Ground in Herb 25 % Cover of Biotic           

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.25 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>15</u>	x 3 =	<u>45</u>
FACU species <u>10</u>	x 4 =	<u>40</u>
UPL species <u>60</u>	x 5 =	<u>300</u>
Column Totals: <u>85</u> (A)		<u>385</u> (B)
Prevalence Index = B/A =		<u>4.5294</u>

**Hydrophytic Vegetation Indicators:**

- 1 - Rapid Test for Hydrophytic Vegetation  
 No 2 - Dominance Test is >50%  
 No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☐ No ☒

Remarks: Sample point dominated by UPL, FACU, and FAC vegetation.

SOIL							Sampling Point:	SP 12-7
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 3/2	60					Sandy loam	No redox
	10 YR 4/4	40						

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

Histosol (A1)

Histic Epipedon (A2)

Black Histic (A3)

Hydrogen Sulfide (A4)

Stratified Layers (A5) (**LRR C**)

1 cm Muck (A9) (**LRR D**)

Depleted Below Dark Surface (A11)

Thick Dark Surface (A12)

Sandy Mucky Mineral (S1)

Sandy Gleyed Matrix (S4)

Sandy Redox (S5)

Stripped Matrix (S6)

Loamy Mucky Mineral (F1)

Loamy Gleyed Matrix (F2)

Depleted Matrix (F3)

Redox Dark Surface (F6)

Depleted Dark Surface (F7)

Redox Depressions (F8)

Vernal Pools (F9)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

1 cm Muck (A9) (**LRR C**)

2 cm Muck (A10) (**LRR B**)

Reduced Vertic (F18)

Red Parent Material (TF2)

Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type:

Depth (inches):

None

**Hydric Soil Present?**

Yes

No

X

**Remarks:** Soil pit lacks hydric soil indicators.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

Surface Water (A1)

High Water Table (A2)

Saturation (A3)

Water Marks (B1) (**Nonriverine**)

Sediment Deposits (B2) (**Nonriverine**)

Drift Deposits (B3) (**Nonriverine**)

Surface Soil Cracks (B6)

Inundation Visible on Aerial Imagery (B7)

Water-Stained Leaves (B9)

Salt Crust (B11)

Biotic Crust (B12)

Aquatic Invertebrates (B13)

Hydrogen Sulfide Odor (C1)

Oxidized Rhizospheres along Living Roots (C3)

Presence of Reduced Iron (C4)

Recent Iron Reduction in Tilled Soils (C6)

Thin Muck Surface (C7)

Other (Explain in Remarks)

Secondary Indicators (2 or more required)

Water Marks (B1) (**Riverine**)

Sediment Deposits (B2) (**Riverine**)

Drift Deposits (B3) (**Riverine**)

Drainage Patterns (B10)

Dry-Season Water Table (C2)

Crayfish Burrows (C8)

Saturation Visible on Aerial Imagery (CS)

Shallow Aquitard (D3)

FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present?

Water Table Present?

Saturation Present? (includes capillary fringe)

Yes

No

X

Depth (inches):

Depth (inches):

Depth (inches):

NA

NA

NA

**Wetland Hydrology Present?**

Yes

No

X

**Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:** No hydrology indicators observed.

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #7 City/County: Lassen County Sampling Date: 8/15/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: 17-7 Feature ID: W8-7  
 Investigator(s): M. Oats, J. Ahn Section, Township, Range: S23, T32N, R15E  
 Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 40.62022 Long: -120.24678 Datum: NAD83  
 Soil Map Unit Name: (348) Saddlerock silty clay, 0 to 2 percent slopes NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? ☐ Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? ☐ (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☒ No ☐  
 Hydric Soil Present? Yes ☒ No ☐  
 Wetland Hydrology Present? Yes ☒ No ☐

Is the Sampled Area within a Wetland? Yes ☒ No ☐

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour \_\_\_\_\_ OHWM Mapped \_\_\_\_\_  
 Feature Designation: Perennial \_\_\_\_\_ Intermittent \_\_\_\_\_ Ephemeral \_\_\_\_\_  
 Natural Drainage \_\_\_\_\_ Artificial Drainage \_\_\_\_\_ Navigable Water \_\_\_\_\_

Remarks: Wetland parameters are present as indicated by primary and secondary hydrology indicators, hydric soil indicator (F3) and a dominance of hydrophytic vegetation.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0		= Total Cover

Sapling/Shrub Stratum (Plot size: 15' radius)	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
1 Roswoo	Rosa woodsii	10	YES	FACU
2				
3				
4				
5				
		10		= Total Cover

Herb Stratum (Plot size: 5' radius)	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
1 Carneb	Carex nebrascensis	30	YES	OBL
2 Junbal	Juncus balticus	25	YES	FACW
3 Spagra	Spartina gracilis	10	NO	FACW
4 Lacser	Lactuca serriola	5	NO	FACU
5				
6				
7				
8				
9				
10				
11				
		70		= Total Cover

Woody Vine Stratum (Plot size: _____)	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
1				
2				
		0		= Total Cover

% Bare Ground in Herb 30 % Cover of Biotic       

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.6667 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species <u>30</u>	x 1 =	<u>30</u>
FACW species <u>35</u>	x 2 =	<u>70</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>15</u>	x 4 =	<u>60</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>80</u> (A)		<u>160</u> (B)
Prevalence Index = B/A =		<u>2</u>

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation  
 Yes 2 - Dominance Test is >50%  
 Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☒ No ☐

Remarks: A dominance of hydrophytic vegetation is present OBL, FACW, and FACU species.

[illegible]

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group # 7 City/County: Lassen County Sampling Date: 8/15/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: SP 18-7 Feature ID: U8-7  
 Investigator(s): M. Oats, J. Ahn Section, Township, Range: S23, T32N, R15E  
 Local relief (hillside, terrace, etc.): Terrace Local Relief (concave, convex, none): Convex Slope (%): 2  
 Subregion (LRR): D Lat: 40.62023 Long: -120.24678 Datum: NAD83  
 Soil Map Unit Name: (348) Saddlerock silty clay, 0 to 2 percent slopes NWI classification: Fresh emergent wetland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? ☐ Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? ☐ (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☐ No ☒  
 Hydric Soil Present? Yes ☐ No ☒  
 Wetland Hydrology Present? Yes ☐ No ☒

Is the Sampled Area within a Wetland? Yes ☐ No ☒

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour \_\_\_\_\_ OHWM Mapped \_\_\_\_\_  
 Feature Designation: Perennial \_\_\_\_\_ Intermittent \_\_\_\_\_ Ephemeral \_\_\_\_\_  
 Natural Drainage \_\_\_\_\_ Artificial Drainage \_\_\_\_\_ Navigable Water \_\_\_\_\_

Remarks: Sample confirmed as upland along slope where all three parameters are absent; upland pair point to W8-7.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1 _____				
2 _____				
3 _____				
4 _____				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)				
1 Roswoo	Rosa woodsii	20	YES	FACU
2 _____				
3 _____				
4 _____				
5 _____				
		20	= Total Cover	

Herb Stratum (Plot size: 5' radius)				
1 Leycin	Leymus cinereus	20	YES	FAC
2 Tradub	Tragopogon dubius	15	YES	UPL
3 Conmac	Conium maculatum	15	YES	FACW
4 Lacser	Lactuca serriola	10	NO	FACU
5 Spagra	Spartina gracilis	10	NO	FACW
6 _____				
7 _____				
8 _____				
9 _____				
10 _____				
11 _____				
		70	= Total Cover	

Woody Vine Stratum (Plot size: _____)				
1 _____				
2 _____				
		0	= Total Cover	

% Bare Ground in Herb 30 % Cover of Biotic \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.5 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>25</u>	x 2 = <u>50</u>
FAC species <u>20</u>	x 3 = <u>60</u>
FACU species <u>30</u>	x 4 = <u>120</u>
UPL species <u>15</u>	x 5 = <u>75</u>
Column Totals: <u>90</u> (A)	<u>305</u> (B)
Prevalence Index = B/A = <u>3.3889</u>	

**Hydrophytic Vegetation Indicators:**

- 1 - Rapid Test for Hydrophytic Vegetation  
 No 2 - Dominance Test is >50%  
 No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

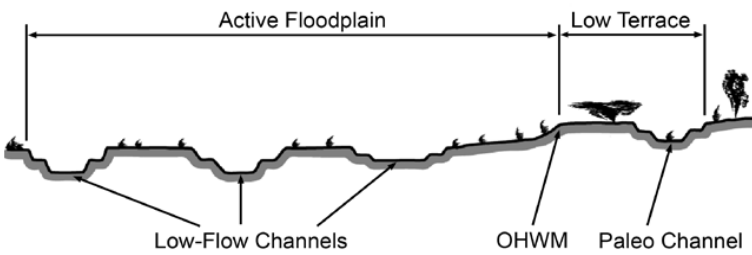
Yes ☐ No ☒

Remarks: Sample point dominated by FACW, FAC, FACU, and UPL vegetation; does not meet dominance of hydrophytic vegetation.



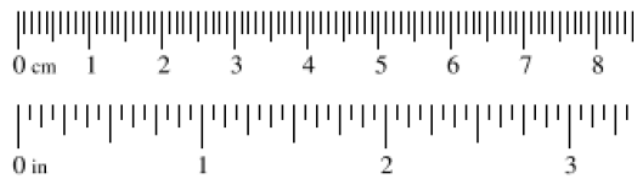
SOIL		Sampling Point: SP 18-7						
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10 YR 2/2	100					Silty loam	No redox
4-16	10 YR 2/2	100					Silty clay loam	No redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.			<sup>2</sup> Location: PL=Pore Lining, M=Matrix.					
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)						<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: <u>None</u>						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Depth (inches): <u>NA</u>								
<b>Remarks:</b> Soil pit lacks hydric soil indicators and reamins same hue, value and chroma throughout soil profile.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>								
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>								
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 102-8		<b>Feature ID:</b> D100-8		<b>Date:</b> 8/28/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, K. Daniels					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.36608, -120.40336		
<b>Potential anthropogenic influences on the channel system:</b> Highway, downstream of Standish, CA.					
<b>Brief site description:</b> Perennial stream flowing eastward. Associated riparian wetland present.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

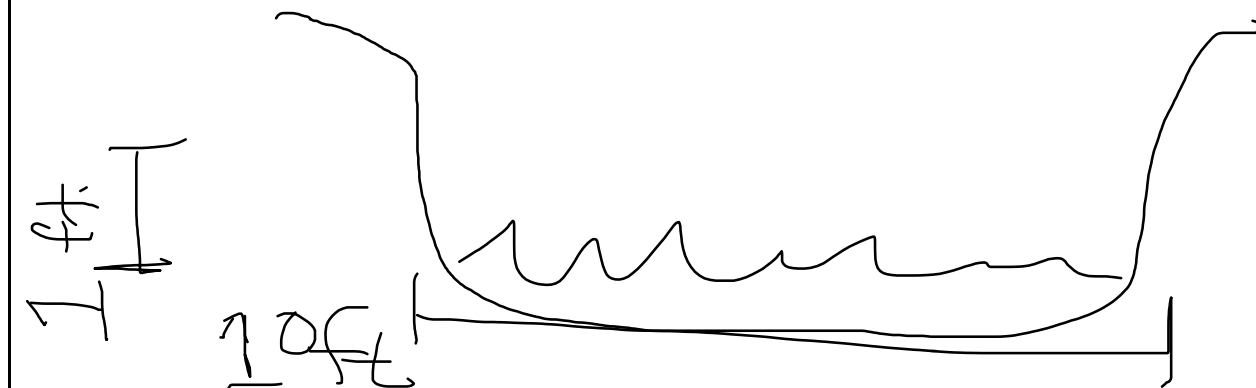


Feature ID: D100-8

Cross section ID:

Date:

Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

Perennial stream crosses under highway through bridge, water present at time of survey. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: SiltyTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



Other: \_\_\_\_\_

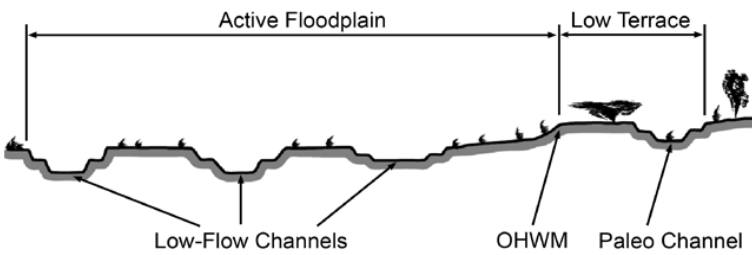
**Comments:**

Perennial stream.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input checked="" type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy clay</u>			
Total veg cover: <u>80</u> % Tree: <u>0</u> % Shrub: <u>30</u> % Herb: <u>50</u> %			
Community successional stage:			
<input type="checkbox"/> NA	<input checked="" type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input checked="" type="checkbox"/> Surface relief		
<input checked="" type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input checked="" type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			
Riparian wetland within active floodplain, indicators present of benches and drift/debris.			

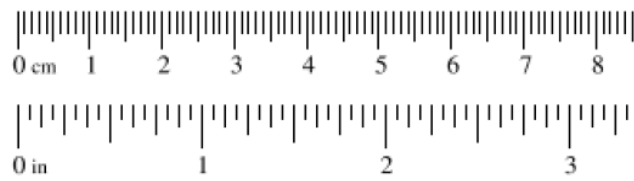
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 105-8		<b>Feature ID:</b> D101-8		<b>Date:</b> 8/28/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, K. Daniels					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.37762. -120.39503		
<b>Potential anthropogenic influences on the channel system:</b> Highway, downstream of Standish, CA.					
<b>Brief site description:</b> Perennial stream flowing eastward. Associated riparian wetland present.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input type="checkbox"/> Mapping on aerial photograph             <input checked="" type="checkbox"/> GPS             <input type="checkbox"/> Digitized on computer             <input type="checkbox"/> Other:             </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

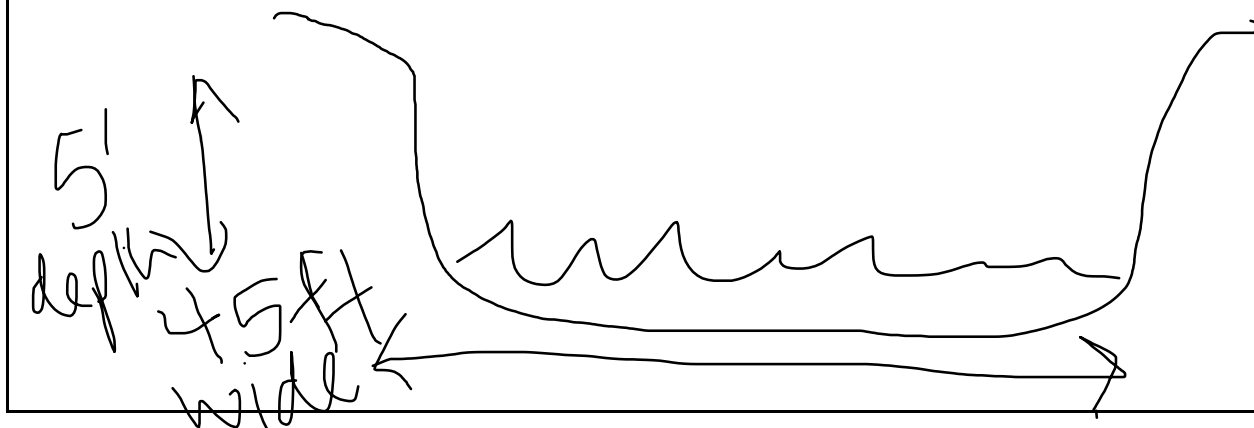


Feature ID: D101-8

Cross section ID:

Date:

Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**☒

Change in average sediment texture

☐

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

Perennial stream (Susan River) crosses under highway through bridge, water present at time of survey. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover.

**Floodplain unit:**☒

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: SiltyTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

☒

NA

☐

Early (herbaceous &amp; seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**☐

Mudcracks

☒

Ripples

☒

Drift and/or debris

☒

Presence of bed and bank

☐

Benches

☐

Soil development

☐

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

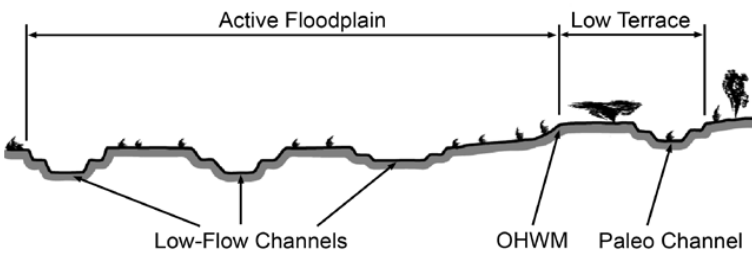
Perennial stream.



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input checked="" type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy clay</u>			
Total veg cover: <u>100</u> % Tree: <u>0</u> % Shrub: <u>80</u> % Herb: <u>20</u> %			
Community successional stage:			
<input type="checkbox"/> NA	<input checked="" type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input checked="" type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input checked="" type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			
Riparian wetland within active floodplain, indicators present of benches.			

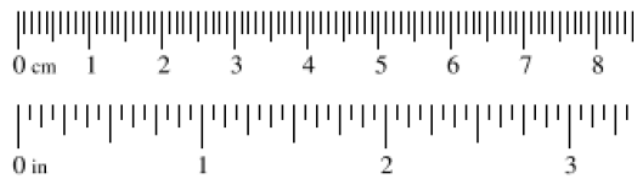
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
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<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 106-8		<b>Feature ID:</b> D102-8		<b>Date:</b> 8/28/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, K. Daniels					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.38021, -120.3771			
<b>Potential anthropogenic influences on the channel system:</b> Highway, fence line present.					
<b>Brief site description:</b> Dry, intermittent stream, crosses a road through a culvert.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> </li> </ol>					
		<input checked="" type="checkbox"/> GPS <input type="checkbox"/> Other:			

### Wentworth Size Classes

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10.08	256	Boulder
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0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

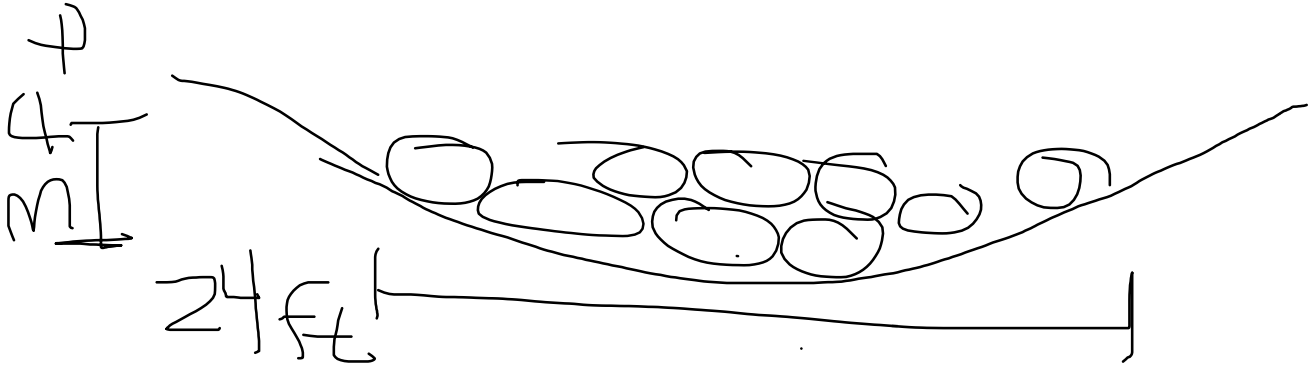


Feature ID: D102-8

Cross section ID:

Date:

Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**

- ☒ Change in average sediment texture  
☐ Change in vegetation species  
☒ Change in vegetation cover

- ☒ Break in bank slope  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

**Comments:**

Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an intermittent stream.

**Floodplain unit:**☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: BouldersTotal veg cover: \_\_\_\_\_ % Tree: 0 % Shrub: 10 % Herb: 0 %

Community successional stage:

- ☒ NA  
☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)  
☐ Late (herbaceous, shrubs, mature trees)

**Indicators:**

- ☐ Mudcracks  
☐ Ripples  
☐ Drift and/or debris  
☒ Presence of bed and bank  
☐ Benches
- ☐ Soil development  
☐ Surface relief  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

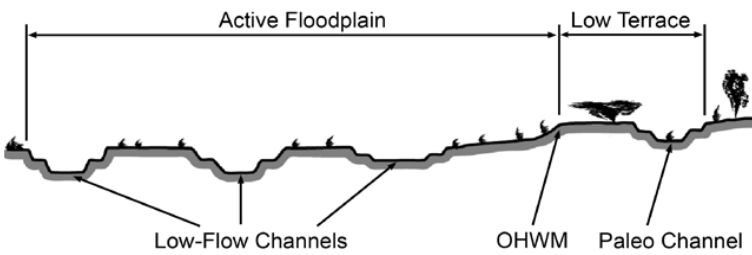
**Comments:**

Dry, intermittent stream, crosses highway through a double culvert.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b><u>Floodplain unit:</u></b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

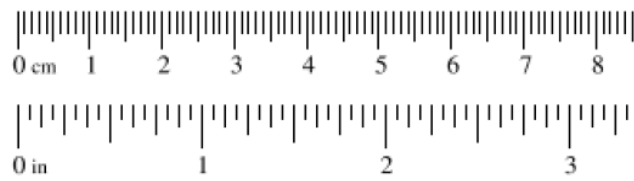
<b><u>Floodplain unit:</u></b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 107-8		<b>Feature ID:</b> D103-8		<b>Date:</b> 8/29/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, K. Daniels					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to County Rd A3 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.35074, -120.42284			
<b>Potential anthropogenic influences on the channel system:</b> Next to roadway (A3), fence line present. Extends to ROW.					
<b>Brief site description:</b> Irrigation canal (currently dry at time of survey) runs under road (A3) through a culvert.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies: </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>  Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other: </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

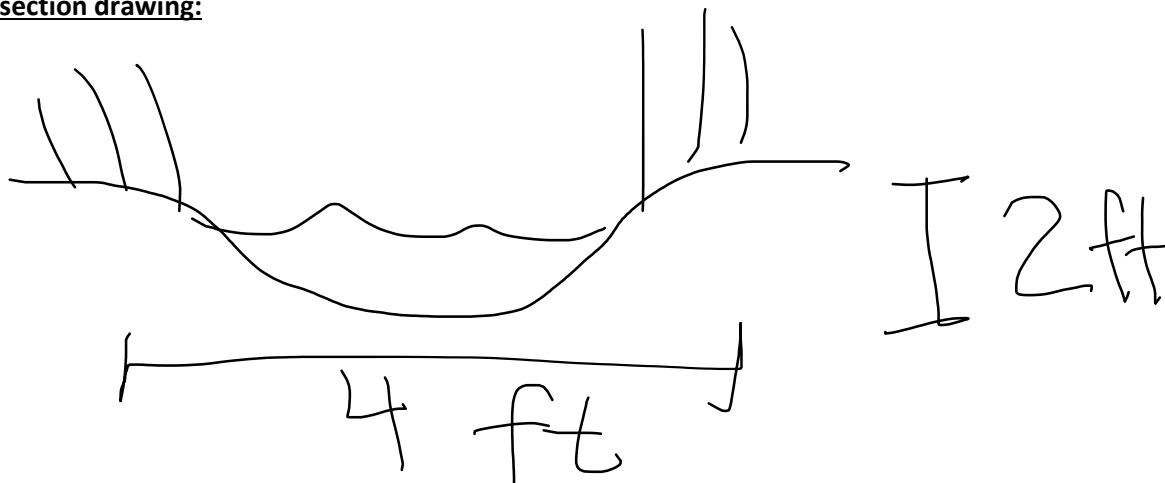


Feature ID: D103-8

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

**Indicators:**☐

Change in average sediment texture

☐

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

Constructed bed and bank feature. OHWM evidenced by sharp break in bank slope, loses vegetation below OHWM, likely excavated for maintenance.

Floodplain unit:☒

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Silty, rocky bottomTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

☒

NA

☐

Early (herbaceous &amp; seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**☐

Mudcracks

☐

Ripples

☒

Drift and/or debris

☒

Presence of bed and bank

☐

Benches

☐

Soil development

☐

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

Irrigation canal that is currently dry at time of survey. Has some drift deposit within low-flow channel.



Feature ID:

Cross section ID:

Date:

Time:

**Floodplain unit:**

☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Mid (herbaceous, shrubs, saplings)

☐

Early (herbaceous & seedlings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐

Mudcracks

☐

Soil development

☐

Ripples

☐

Surface relief

☐

Drift and/or debris

☐

Other: \_\_\_\_\_

☐

Presence of bed and bank

☐

Other: \_\_\_\_\_

☐

Benches

☐

Other: \_\_\_\_\_

**Comments:**

**Floodplain unit:**

☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Mid (herbaceous, shrubs, saplings)

☐

Early (herbaceous & seedlings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐

Mudcracks

☐

Soil development

☐

Ripples

☐

Surface relief

☐

Drift and/or debris

☐

Other: \_\_\_\_\_

☐

Presence of bed and bank

☐

Other: \_\_\_\_\_

☐

Benches

☐

Other: \_\_\_\_\_

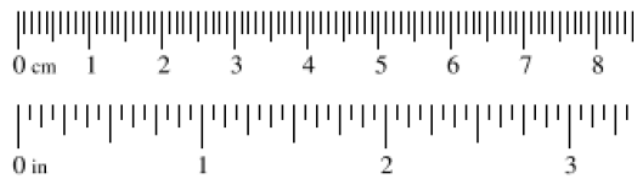
**Comments:**

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 108-8		<b>Feature ID:</b> D104-8		<b>Date:</b> 8/29/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, K. Daniels					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to County Rd A3 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.34708, -120.42279			
<b>Potential anthropogenic influences on the channel system:</b> Adjacent to County Rd A3 and between two agricultural fields (irrigated alfalfa fields).					
<b>Brief site description:</b> Intermittent stream with no water present. Marginal riparian wetland present within OHWM ( <i>Salix exigua</i> ); upland species present above OHWM.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay



Feature ID: D104-8

Cross section ID:

Date:

Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

Intermittent stream crosses under highway through culvert, no water present at time of survey. *Salix exigua* present within banks of stream channel, however *Thinopyrum intermedium* and *Ulmus pumila* present above OHWM.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Silty, rocky bottomTotal veg cover: 50 % Tree: 0 % Shrub: 40 % Herb: 10 %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



Other: \_\_\_\_\_

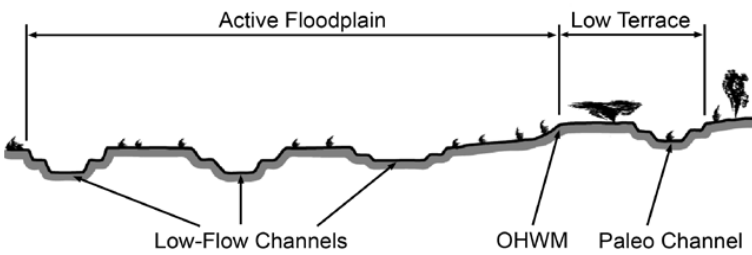
**Comments:**

Intermittent stream with shrub and herb cover within banks of channel.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input checked="" type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Silty loam</u>			
Total veg cover: <u>90</u> % Tree: <u>10</u> % Shrub: <u>30</u> % Herb: <u>50</u> %			
Community successional stage:			
<input type="checkbox"/> NA	<input checked="" type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input checked="" type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input checked="" type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			
Trees, shrubs, and grasses present within active floodplain, indicators present of benches and drift/debris.			

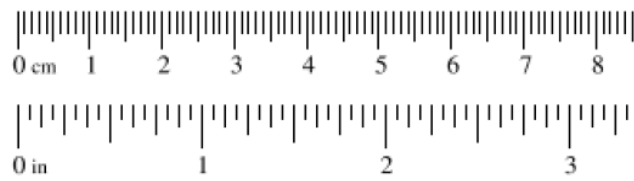
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 109-8		<b>Feature ID:</b> D105-8		<b>Date:</b> 8/29/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, K. Daniels					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to County Rd A3 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.34342, -120.42280			
<b>Potential anthropogenic influences on the channel system:</b> Next to roadway (A3). Extends beyond ROW.					
<b>Brief site description:</b> Irrigation canal (water present at time of survey) runs under road (A3) through a culvert, but has a dam to keep some water in canal.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div style="width: 45%;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay



Feature ID: D105-8

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

## Indicators:

☒

Change in average sediment texture

☐

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☒Other: water marks☐

Other: \_\_\_\_\_

## Comments:

Irrigation canal, lined with concrete. Mapped OHWM at stains, where it seemed water would flow when high flows through canal.

Floodplain unit:☒

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

## Characteristics of the floodplain unit:

Average sediment texture: ConcreteTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

☒

NA

☐

Early (herbaceous &amp; seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

## Indicators:

☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☒

Presence of bed and bank

☐

Benches

☐

Soil development

☐

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

## Comments:

Irrigation canal that is concrete lined and is dammed at roadway (culvert present).



Feature ID: D105-8

Cross section ID:

Date:

Time:

**Floodplain unit:**

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

**GPS point:** \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☐ Presence of bed and bank

☐ Benches

☐ Soil development

☐ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

**Comments:**

**Floodplain unit:**

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

**GPS point:** \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☐ Presence of bed and bank

☐ Benches

☐ Soil development

☐ Surface relief

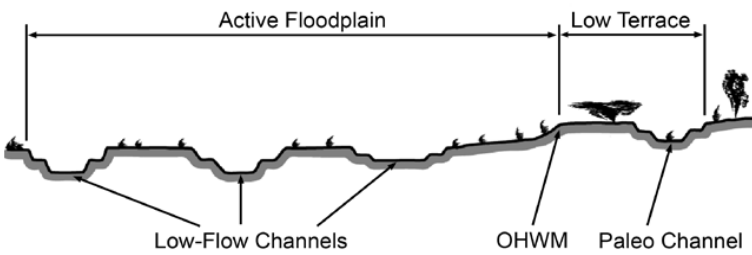
☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

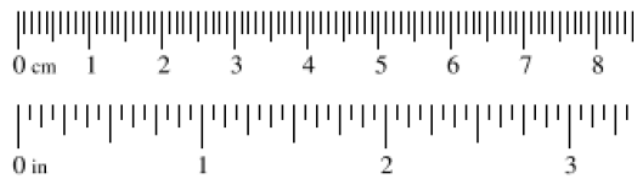
**Comments:**

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 112-8		<b>Feature ID:</b> D106-8		<b>Date:</b> 8/29/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, K. Daniels					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to County Rd A3 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.28594, -120.48443			
<b>Potential anthropogenic influences on the channel system:</b> Runs perpendicular to county roadway (A3), fence line present. Extends beyond ROW.					
<b>Brief site description:</b> Intermittent stream (currently dry at time of survey) runs under road (A3) through a culvert.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

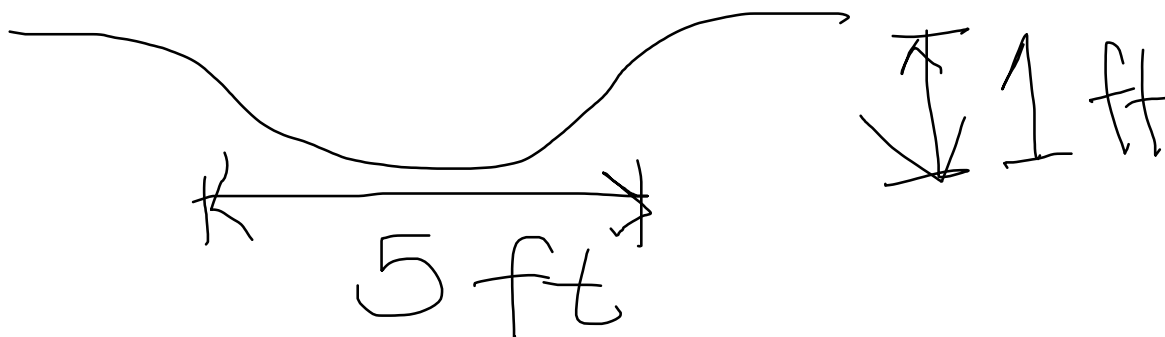


Feature ID: D106-8

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

**Indicators:**☐

Change in average sediment texture

☐

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

Defined bed and bank feature. OHWM evidenced by moderate break in bank slope and loss of vegetation below OHWM. Sampling point documents an intermittent stream.

Floodplain unit:☒

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

☒

NA

☐

Early (herbaceous &amp; seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☒

Presence of bed and bank

☐

Benches

☐

Soil development

☒

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

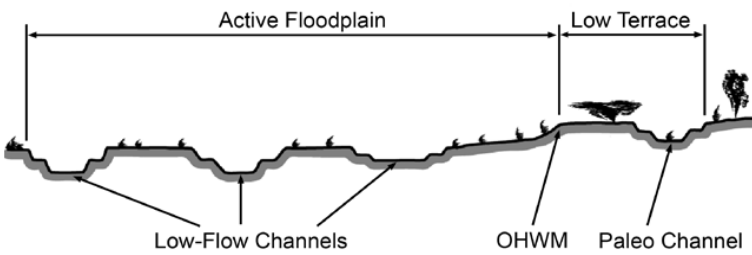
**Comments:**

Intermittent stream that is currently dry at time of survey. Has some sorting within low-flow channel.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

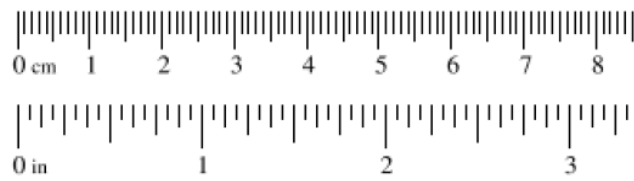
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 115-8		<b>Feature ID:</b> D107-8		<b>Date:</b> 8/29/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, K. Daniels					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.30444, -120.47831		
<b>Potential anthropogenic influences on the channel system:</b> Adjacent to County Rd A3; fence line present.					
<b>Brief site description:</b> Perennial stream (Baxter Creek) crosses a road through a very large (~30 ft) culvert.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input type="checkbox"/> Mapping on aerial photograph             <input checked="" type="checkbox"/> GPS             <input type="checkbox"/> Digitized on computer             <input type="checkbox"/> Other:             </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

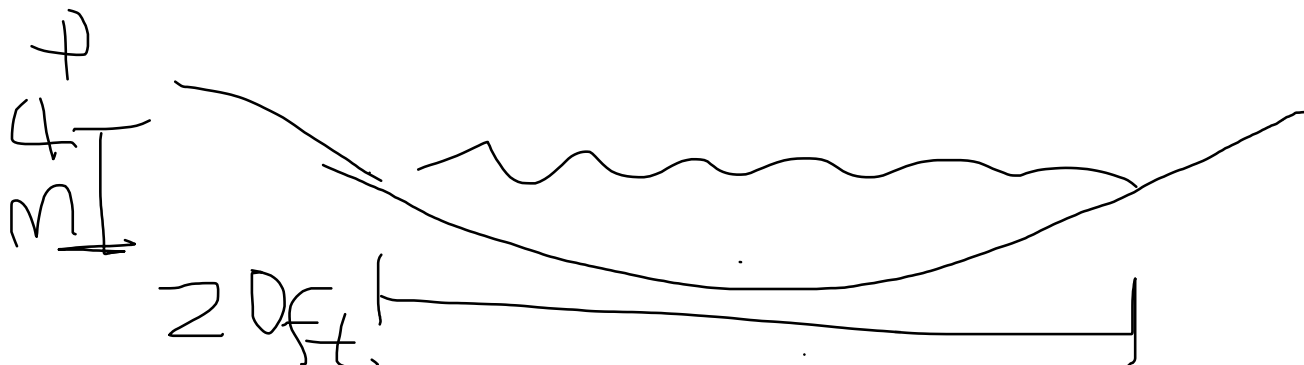


Feature ID: D107-8

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:

Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

Comments:

Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents a perennial stream.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: Silty, muddy water present in stream.Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

Indicators:

Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



Other: \_\_\_\_\_

Comments:

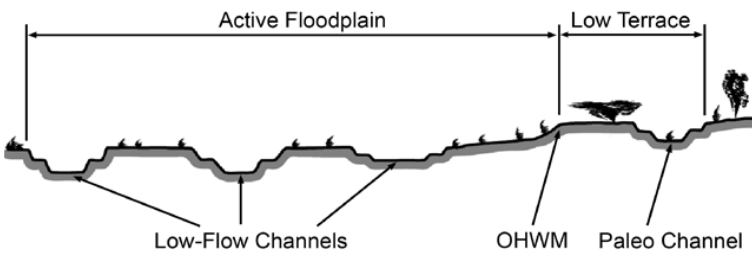
Perennial stream with water present.



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel <input checked="" type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace		
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: <u>100</u> % Tree: <u>0</u> % Shrub: <u>10</u> % Herb: <u>90</u> %			
Community successional stage:			
<input type="checkbox"/> NA <input type="checkbox"/> Early (herbaceous & seedlings)		<input checked="" type="checkbox"/> Mid (herbaceous, shrubs, saplings) <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks <input type="checkbox"/> Ripples <input type="checkbox"/> Drift and/or debris <input type="checkbox"/> Presence of bed and bank <input checked="" type="checkbox"/> Benches		<input type="checkbox"/> Soil development <input checked="" type="checkbox"/> Surface relief <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	
<b>Comments:</b>			
Phalaris arundacea and Salix exigua are predominant species in active floodplain. Riparian wetland, but outside of ROW.			

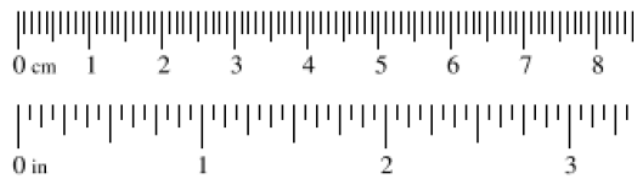
<b>Floodplain unit:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace		
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA <input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Mid (herbaceous, shrubs, saplings) <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks <input type="checkbox"/> Ripples <input type="checkbox"/> Drift and/or debris <input type="checkbox"/> Presence of bed and bank <input type="checkbox"/> Benches		<input type="checkbox"/> Soil development <input type="checkbox"/> Surface relief <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 116-8		<b>Feature ID:</b> D108-8		<b>Date:</b> 8/29/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, K. Daniels					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to County Rd A3 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.31148. -120.45225			
<b>Potential anthropogenic influences on the channel system:</b> Runs perpendicular to county roadway (A3), fence line present. Extends beyond ROW.					
<b>Brief site description:</b> Intermittent stream (currently dry at time of survey) runs under road (A3) through three culverts.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

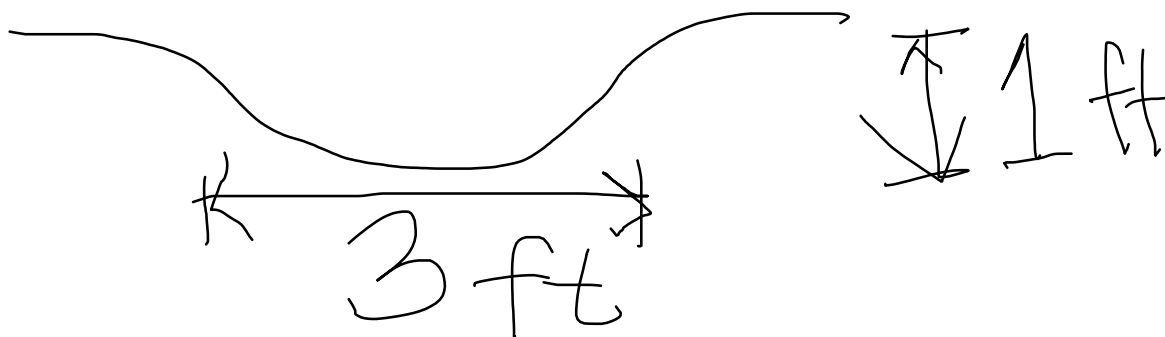


Feature ID: D108-8

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

**Indicators:**☐

Change in average sediment texture

☐

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

Defined bed and bank feature with scoured channel. OHWM evidenced by moderate break in bank slope and loses vegetation below OHWM. Sampling point documents an intermittent stream.

Floodplain unit:☒

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: SandyTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

☒

NA

☐

Early (herbaceous &amp; seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☒

Presence of bed and bank

☐

Benches

☐

Soil development

☒

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

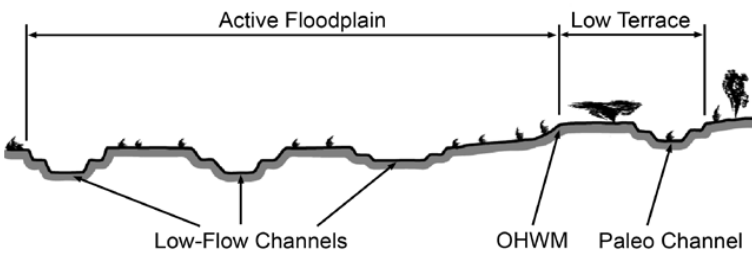
**Comments:**

Intermittent stream that is currently dry at time of survey. Has some sorting (cobbles) within low-flow channel.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

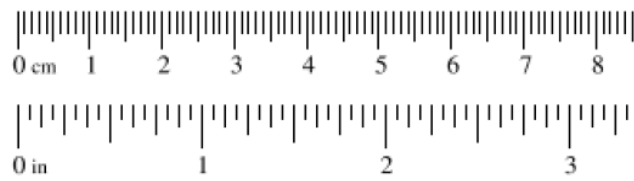
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 200-8		<b>Feature ID:</b> D200-8		<b>Date:</b> 9/10/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M.Oats, T. Kayatsky, P. Ferral					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.27520, -120.48276			
<b>Potential anthropogenic influences on the channel system:</b> Drainage under HWY 395 via c200-8 Intermittent channel.					
<b>Brief site description:</b> Intermittent drainage, disturbed by cattle. OHWM and TOB are the same.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div style="text-align: center;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

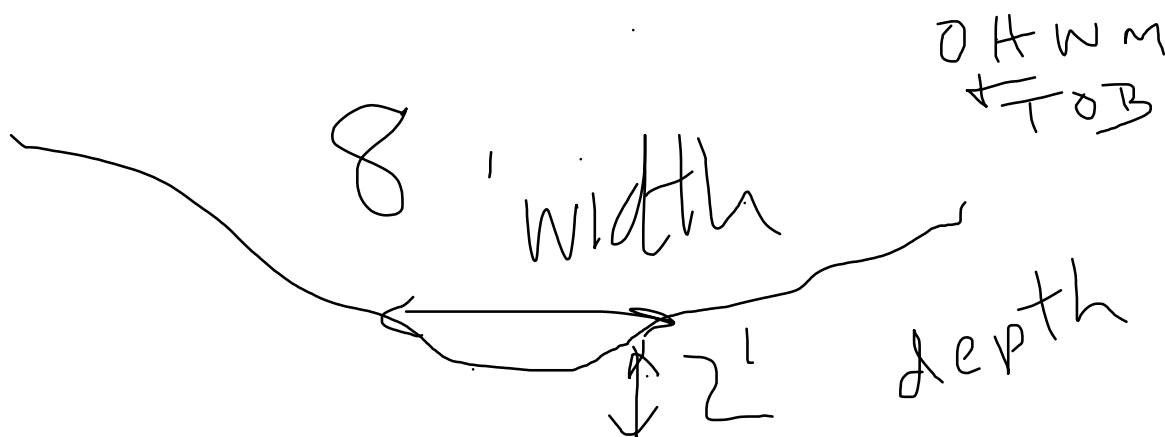


Feature ID: D200-8

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

## Indicators:



Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

## Comments:

Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an intermittent stream.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

## Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

## Indicators:



Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: Surface soil cracks



Other: \_\_\_\_\_



Other: \_\_\_\_\_

## Comments:

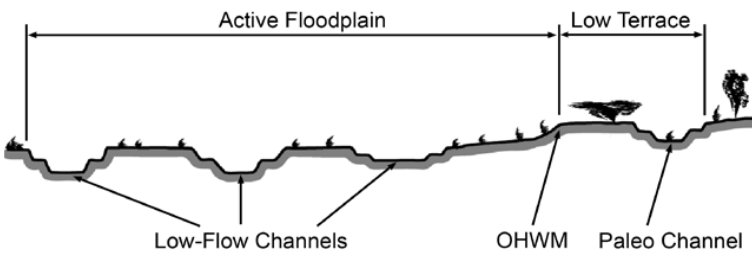
No water present in low-flow channel. Surface relief is present and the bed has surface soil cracks in the low-flow channel.



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

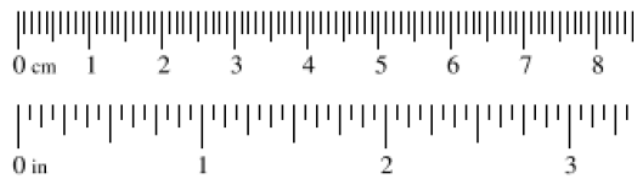
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 201-8		<b>Feature ID:</b> D201-8		<b>Date:</b> 9/10/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M.Oats, T. Kayatsky, P. Ferral					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.37818, -120.39334			
<b>Potential anthropogenic influences on the channel system:</b> Drainage adjacent to HWY 395. Appears to be an intermittent drainage that is dry at time of survey.					
<b>Brief site description:</b> Intermittent stream, manipulated for storm drainage. OHWM and TOB are the same.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

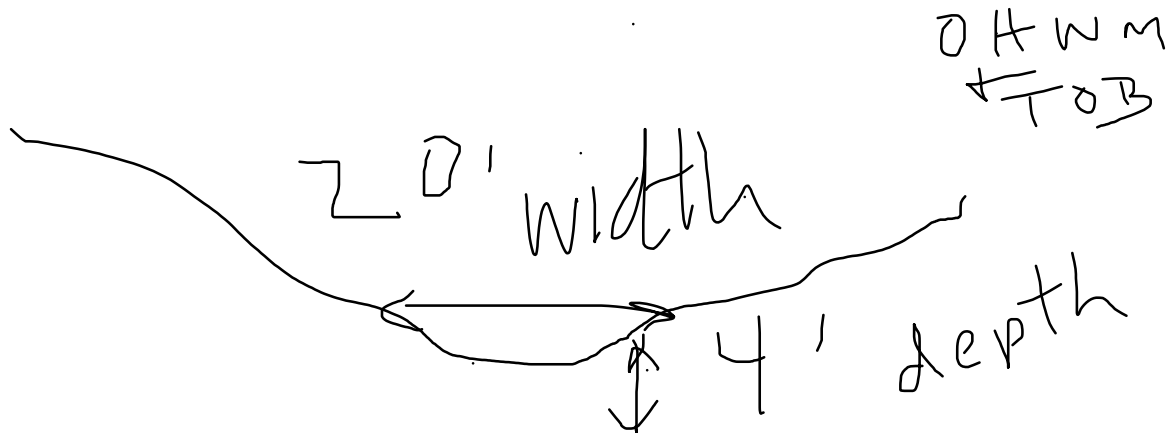


Feature ID: D201-8

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

## Indicators:

- ☒ Change in average sediment texture  
☐ Change in vegetation species  
☒ Change in vegetation cover

- ☒ Break in bank slope  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

## Comments:

Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an intermittent stream.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

## Characteristics of the floodplain unit:

Average sediment texture: cobble, sand, gravelTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- ☒ NA  
☐ Early (herbaceous & seedlings)  
☐ Mid (herbaceous, shrubs, saplings)  
☐ Late (herbaceous, shrubs, mature trees)

## Indicators:

- ☐ Mudcracks  
☐ Ripples  
☐ Drift and/or debris  
☐ Presence of bed and bank  
☐ Benches  
☐ Soil development  
☐ Surface relief  
☐ Other: Surface soil cracks  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

## Comments:

No water present in low-flow channel. Surface relief is present and the bed has surface soil cracks in the low-flow channel.

Feature ID:

Cross section ID:

Date:

Time:

**Floodplain unit:**

☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Mid (herbaceous, shrubs, saplings)

☐

Early (herbaceous & seedlings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐

Mudcracks

☐

Soil development

☐

Ripples

☐

Surface relief

☐

Drift and/or debris

☐

Other: \_\_\_\_\_

☐

Presence of bed and bank

☐

Other: \_\_\_\_\_

☐

Benches

☐

Other: \_\_\_\_\_

**Comments:**

**Floodplain unit:**

☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Mid (herbaceous, shrubs, saplings)

☐

Early (herbaceous & seedlings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐

Mudcracks

☐

Soil development

☐

Ripples

☐

Surface relief

☐

Drift and/or debris

☐

Other: \_\_\_\_\_

☐

Presence of bed and bank

☐

Other: \_\_\_\_\_

☐

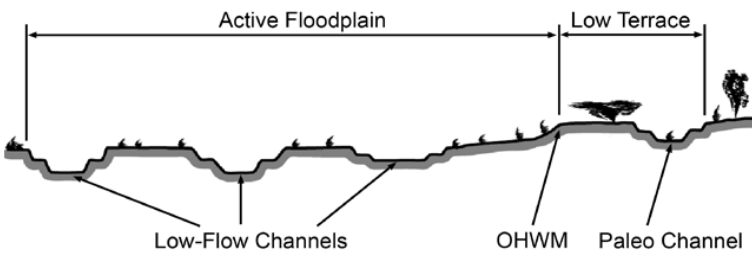
Benches

☐

Other: \_\_\_\_\_

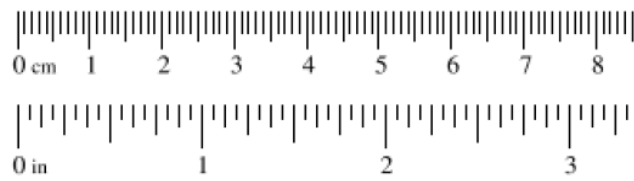
**Comments:**

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 203-8		<b>Feature ID:</b> D202-8		<b>Date:</b> 9/11/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M.Oats, T. Kayatsky, P. Ferral					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.27588, -120.48333			
<b>Potential anthropogenic influences on the channel system:</b> Ephemeral drainage adjacent to Highway					
<b>Brief site description:</b> Small ephemeral stream at C202-8. OHWM and TOB are the same.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

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1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

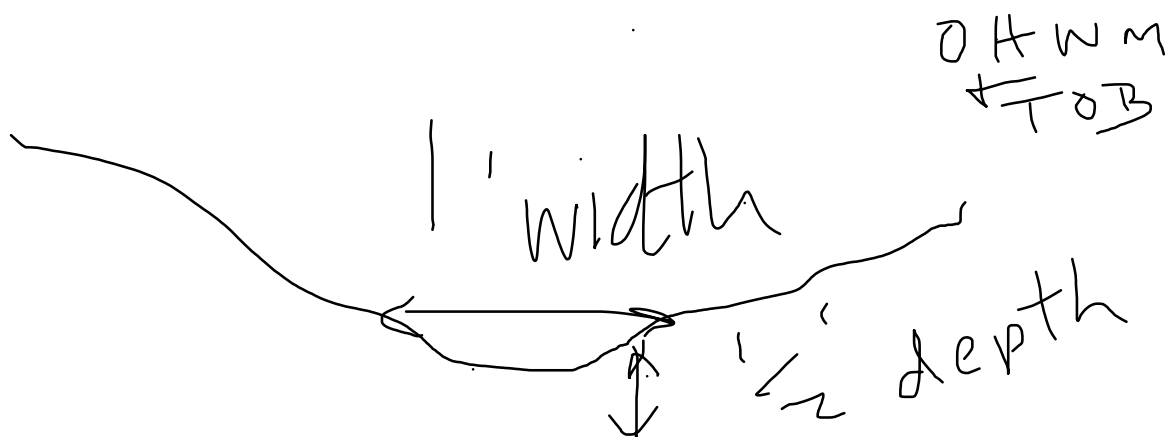


Feature ID: D202-8

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

## Indicators:

☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_

## Comments:

Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

Floodplain unit:☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

## Characteristics of the floodplain unit:

Average sediment texture: sand, gravel, cobbleTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

☒ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)

## Indicators:

☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☐ Soil development☒ Surface relief☒ Other: Surface soil cracks☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_

## Comments:

No water present in low-flow channel. Surface relief is present and the bed has surface soil cracks in the low-flow channel.



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Sampling Point: 01-8

Feature ID: W01a-8

Project/Site: Zayo Fiberoptic Interconnect Project, Group #8

City/County: Lassen County

Sampling Date: 8/29/2019

Applicant/Owner: Zayo Group

State: California

Investigator(s): T. Kayatsky, P. Ferral

Section, Township, Range: S23, T28N, R13E

Local relief (hillside, terrace, etc.): Roadside depression

Local Relief (concave, convex, none): Concave

Slope (%): 3

Subregion (LRR): D

Lat: 40.27428

Long: -120.48186

Datum: NAD83

Soil Map Unit Name: (287) Mottsville loamy coarse sand, 2 to 9 percent slopes

NW1 classification: PFOC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? ☐ Are "Normal Circumstances" present? Yes ☒ No ☐Are Vegetation ☐ No, Soil ☒ Yes, or Hydrology ☐ No naturally problematic? ☐ (If needed, explain any answers in Remarks.)**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**Hydrophytic Vegetation Present? Yes ☒ No ☐Hydric Soil Present? Yes ☒ No ☐Wetland Hydrology Present? Yes ☒ No ☐Is the Sampled Area  
within a Wetland?Yes ☒ No ☐

**Remarks:** Riparian wetland adjacent to intermittent stream. Wetland parameters indicated by dominance of hydrophytic vegetation and hydrology. Problematic soils are present given low soil chroma and the proximity to Highway 395 (i.e., roadbase/road fill apparent in sample).

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: _____)				
1 Popbal	Populus balsamifera	90	YES	FAC
2 Roswoo	Rosa woodsii	20	NO	FACU
3 SALEXI	Salix exigua	40	YES	FACW
4				
5				
		150	= Total Cover	

Herb Stratum (Plot size: 5' radius)				
1 conmac	Conium maculatum	10	YES	FACW
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		10	= Total Cover	

Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

%Bare Ground in Herb

Stratum: 95

% Cover of Biotic

Crust: \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species

That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant

Species Across All Strata: 3 (B)

Percent of Dominant Species

That Are OBL, FACW, or FAC: 100% (A/B)

**Prevalence Index worksheet:**

Total % Cover of: Multiply by:

OBL species 0 x 1 = 0

FACW species 50 x 2 = 100

FAC species 90 x 3 = 270

FACU species 20 x 4 = 80

UPL species 0 x 5 = 0

Column Totals: 160 (A) 450 (B)

Prevalence Index = B/A = 2.8125

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is &gt;50%

3 - Prevalence Index is ≤3.0<sup>1</sup>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)5 - Wetland Non-Vascular Plants<sup>1</sup>6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation

Present?

Yes ☒ No ☐

**Remarks:** Hydrophytic vegetation dominated area.

SOIL							Sampling Point: 01-8	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 yr 2/1	100					Sandy/gravelly/loam	Roots/brush first 3"
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			Indicators for Problematic Hydric Soils <sup>3</sup> :		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) (LRR C)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) (LRR B)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) (LRR C)			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)			<input type="checkbox"/> Redox Dark Surface (F6)			<input checked="" type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
Restrictive Layer (if present):						Hydric Soil Present?		
Type: <input type="text" value="None"/>						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Depth (inches): <input type="text" value="NA"/>								
Remarks: Hydric soils not observed. Soils are problematic due to low chroma potentially obscuring redox features, the proximity to Highway 395 (i.e., roadbase/road fill apparent in sample), and vegetation and hydrology indicators are present.								
HYDROLOGY								
Wetland Hydrology Indicators:						Secondary Indicators (2 or more required)		
Primary Indicators (minimum of one required; check all that apply)						Water Marks (B1) (Riverine)		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input checked="" type="checkbox"/> Sediment Deposits (B2) (Riverine)		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input checked="" type="checkbox"/> Drift Deposits (B3) (Riverine)		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input checked="" type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) (Nonriverine)			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
Field Observations:						Wetland Hydrology Present?		
Surface Water Present?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text" value="NA"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Water Table Present?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text" value="NA"/>			
Saturation Present?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text" value="NA"/>			
(includes capillary fringe)								
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks: Riparian wetland located adjacent to intermittent stream. Hydrology indicated by sediment and drift deposits. Drainage patterns also observed.								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Sampling Point: SP 02-8

Feature ID: U01-8

Project/Site: Zayp Fiberoptic Interconnect Project, Group #8

City/County: Lassen County

Sampling Date: 8/29/2019

Applicant/Owner: Zayo Group

State: California

Investigator(s): T. Kayatsky, P. Ferral

Section, Township, Range: S23, T28N, R13E

Local relief (hillside, terrace, etc.): Roadside depression

Local Relief (concave, convex, none): Concave

Slope (%): 4

Subregion (LRR): D

Lat: 40.27429

Long: 120.48193

Datum: NAD83

Soil Map Unit Name: (287) Mottsville loamy coarse sand, 2 to 9 percent slopes

NW1 classification:

None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed?Are "Normal Circumstances" present? Yes ☒ No ☐Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic?

(If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**Hydrophytic Vegetation Present? Yes ☒ No ☐Hydric Soil Present? Yes ☐ No ☒Wetland Hydrology Present? Yes ☐ No ☒Is the Sampled Area  
within a Wetland?Yes ☐ No ☒**Remarks:** Sample confirmed as upland along slope where indicators of wetland hydrology and hydric soils were absent; upland pair point to W01-8**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: _____)				
1 Popbal	Populus balsamifera	40	YES	FAC
2 Roswoo	Rosa woodsii	5	NO	FACU
3 SALEXI	Salix exigua	15	YES	FACW
4 Erinau		3		
5				
		63	= Total Cover	

Herb Stratum (Plot size: 5' radius)				
1 Brotec	Bromus tectorum	80	YES	UPL
2 Medsat	Medicago sativa	10	NO	UPL
3 Elyely	Elymus elymoides	3	NO	FACU
4				
5				
6				
7				
8				
9				
10				
11				
		93	= Total Cover	

Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

%Bare Ground in Herb

% Cover of Biotic

Stratum: \_\_\_\_\_

Crust: \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species

That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant

Species Across All Strata: 3 (B)

Percent of Dominant Species

That Are OBL, FACW, or FAC: 67% (A/B)

**Prevalence Index worksheet:**

Total % Cover of: Multiply by:

OBL species 0 x 1 = 0

FACW species 15 x 2 = 30

FAC species 40 x 3 = 120

FACU species 8 x 4 = 32

UPL species 10 x 5 = 50

Column Totals: 73 (A) 232 (B)

Prevalence Index = B/A = 3.1781

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is &gt;50%

3 - Prevalence Index is ≤3.0<sup>1</sup>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)5 - Wetland Non-Vascular Plants<sup>1</sup>6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.**Hydrophytic  
Vegetation  
Present?**Yes ☒ No ☐**Remarks:** Hydrophytic vegetation dominated area.

[illegible]

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #8 City/County: Lassen County Sampling Date: 8/28/2019

Applicant/Owner: Zayo Group State: California Sampling Point: SP 100-8 Feature ID: W100-8

Investigator(s): M. Oats, K. Daniels Section, Township, Range: S16, T29N, R14E

Local relief (hillside, terrace, etc.): Terrace Local Relief (concave, convex, none): Concave Slope (%): 4

Subregion (LRR): D Lat: 40.36609 Long: -120.40341 Datum: NAD83

Soil Map Unit Name: (247) Humboldt silty clay, 0 to 1 percent slopes, occasionally flooded NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☒ No ☐

Hydric Soil Present? Yes ☒ No ☐

Wetland Hydrology Present? Yes ☒ No ☐

Is the Sampled Area within a Wetland? Yes ☒ No ☐

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_

Indicators: Defined bed and bank: \_\_\_\_\_ Scour \_\_\_\_\_ OHWM Mapped \_\_\_\_\_

Feature Designation: Perennial \_\_\_\_\_ Intermittent \_\_\_\_\_ Ephemeral \_\_\_\_\_

Natural Drainage \_\_\_\_\_ Artificial Drainage \_\_\_\_\_ Navigable Water \_\_\_\_\_

**Remarks:** Wetland parameters are present as indicated by hydrology indicator (saturation, high water table), hydric soils (depleted below dark surface), and a dominance of hydrophytic vegetation.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: 15' radius)				
1	Salexi Salix exigua	10	YES	FACW
2				
3				
4				
5				
		10	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5' radius)				
1	Typlat Typha latifolia	25	YES	OBL
2	Phaar Phalaris arundinacea	60	YES	FACW
3	Xanstr Xanthium strumarium	15	NO	FAC
4				
5				
6				
7				
8				
9				
10				
11				
		100	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

% Bare Ground in Herb 10 % Cover of Biotic \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species 25	x 1 =	25
FACW species 70	x 2 =	140
FAC species 15	x 3 =	45
FACU species 0	x 4 =	0
UPL species 0	x 5 =	0
Column Totals: 110 (A)		210 (B)
Prevalence Index = B/A = 1.9091		

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>

4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

5 - Wetland Non-Vascular Plants<sup>1</sup>

6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☒ No ☐

**Remarks:** Dominance of hydrophytic vegetation present (OBL and FACW species).

SOIL							Sampling Point: SP 100-8	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	10YR 3/1	100					Sand	
3-6	Gley 1 N 2.5/	70					Sandy clay	Manganese concretions present
	2.5Y 2.5/1	30						Manganese concretions present
6-16	2.5Y 2.5/1	98	10YR 3/6	2	C	PL	Sandy Clay	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input checked="" type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>								
Type: <u>None</u>			<b>Hydric Soil Present?</b>					
Depth (inches): <u>NA</u>			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
<b>Remarks:</b> Hydric soil indicator F2 (Loamy Gleyed Matrix) met by a gleyed matrix within at least 60% of a layer starting in the upper 12 inches or mineral soil.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input checked="" type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input checked="" type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>								
Surface Water Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>0</u>		<b>Wetland Hydrology Present?</b>			
Water Table Present?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>9</u>		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Saturation Present?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>0</u>					
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicator present as evidenced by saturation and high water table and secondary indicators of drift deposits (riverine) and dominant species passed FAC-neutral test.								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #8 City/County: Lassen County Sampling Date: 8/28/2019

Applicant/Owner: Zayo Group State: California Sampling Point: SP 101-8 Feature ID: U100-8

Investigator(s): M. Oats, K. Daniels Section, Township, Range: S16, T29N, R14E

Local relief (hillside, terrace, etc.): Hillside Local Relief (concave, convex, none): Concave Slope (%): 8

Subregion (LRR): D Lat: 40.36606 Long: -120.40342 Datum: NAD83

Soil Map Unit Name: (247) Humboldt silty clay, 0 to 1 percent slopes, occasionally flooded NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☒ No ☐

Hydric Soil Present? Yes ☐ No ☒

Wetland Hydrology Present? Yes ☐ No ☒

Is the Sampled Area within a Wetland? Yes ☐ No ☒

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_

Indicators: Defined bed and bank: \_\_\_\_\_ Scour \_\_\_\_\_ OHWM Mapped \_\_\_\_\_

Feature Designation: Perennial \_\_\_\_\_ Intermittent \_\_\_\_\_ Ephemeral \_\_\_\_\_

Natural Drainage \_\_\_\_\_ Artificial Drainage \_\_\_\_\_ Navigable Water \_\_\_\_\_

**Remarks:** Sample confirmed as upland along topographic slope where indicators of hydric soil and wetland hydrology indicators are absent; hydrophytic vegetation is present here in the upland transition boundary; upland pair point to W100-8.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)				
1				
2				
3				
4				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: 15' radius)				
1		5		
2				
3				
4				
5				
		5	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5' radius)				
1	Solspe Solidago spectabilis	30	YES	FACW
2	Leplat Lepidium latifolium	20	YES	FAC
3	Cirarv Cirsium arvense	40	YES	FACU
4				
5				
6				
7				
8				
9				
10				
11				
		90	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

% Bare Ground in Herb 10 % Cover of Biotic \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.6667 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species	0	x 1 = 0
FACW species	30	x 2 = 60
FAC species	20	x 3 = 60
FACU species	40	x 4 = 160
UPL species	0	x 5 = 0
Column Totals:	90 (A)	280 (B)
Prevalence Index = B/A =		3.1111

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

No 3 - Prevalence Index is ≤3.0<sup>1</sup>

4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

5 - Wetland Non-Vascular Plants<sup>1</sup>

6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☒ No ☐

**Remarks:** Sample point dominated by FACW, FAC, and FACU vegetation. A dominance of hydrophytic vegetation is present.





## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #8 City/County: Lassen County Sampling Date: 8/28/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: SP 103-8 Feature ID: W102-8a  
 Investigator(s): M. Oats, K. Daniels Section, Township, Range: S15, T29N, R14E  
 Local relief (hillside, terrace, etc.): Hillside Local Relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR): D Lat: 40.37762 Long: -120.39503 Datum: NAD83  
 Soil Map Unit Name: (362) Smocreek silt loam, sodic, 0 to 2 percent slopes NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☒ yes, or Hydrology ☐ No naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☒ No ☐  
 Hydric Soil Present? Yes ☒ No ☐  
 Wetland Hydrology Present? Yes ☒ No ☐  
 Is the Sampled Area within a Wetland? Yes ☒ No ☐

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour: \_\_\_\_\_ OHWM Mapped: \_\_\_\_\_  
 Feature Designation: Perennial: \_\_\_\_\_ Intermittent: \_\_\_\_\_ Ephemeral: \_\_\_\_\_  
 Natural Drainage: \_\_\_\_\_ Artificial Drainage: \_\_\_\_\_ Navigable Water: \_\_\_\_\_

**Remarks:** Wetland parameters are present as indicated by a dominance of hydrophytic vegetation and secondary indicators of hydrology (drainage patterns, water marks, and sediment deposits), indicating recent inundation of feature. Problematic hydric soils are presumed in recently developing area subject to recent inundation.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: 15' radius)				
1	Salexi Salix exigua	80	YES	FACW
2				
3				
4				
5				
		80	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5' radius)				
1	Cirarv Cirsium arvense	15	YES	FACU
2	Leplat Lepidium latifolium	20	YES	FAC
3				
4				
5				
6				
7				
8				
9				
10				
11				
		35	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

% Bare Ground in Herb 65 % Cover of Biotic         

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.6667 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>80</u>	x 2 = <u>160</u>
FAC species <u>20</u>	x 3 = <u>60</u>
FACU species <u>15</u>	x 4 = <u>60</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>115</u> (A)	<u>280</u> (B)
Prevalence Index = B/A = <u>2.4348</u>	

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation  
 Yes 2 - Dominance Test is >50%  
 Yes 3 - Prevalence Index is  $\leq 3.0$ <sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☒ No ☐

**Remarks:** A dominance of hydrophytic vegetation is present (OBL and FACW species).



## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #8 City/County: Lassen County Sampling Date: 8/28/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: SP 104-8 Feature ID: U102-8  
 Investigator(s): M. Oats, K. Daniels Section, Township, Range: S15, T29N, R14E  
 Local relief (hillside, terrace, etc.): Hillside Local Relief (concave, convex, none): Concave Slope (%): 8  
 Subregion (LRR): D Lat: 40.37762 Long: -120.39503 Datum: NAD83  
 Soil Map Unit Name: (362) Smocreek silt loam, sodic, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? ☐ Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? ☐ (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☐ No ☒  
 Hydric Soil Present? Yes ☐ No ☒  
 Wetland Hydrology Present? Yes ☐ No ☒

Is the Sampled Area within a Wetland? Yes ☐ No ☒

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour: \_\_\_\_\_ OHWM Mapped: \_\_\_\_\_  
 Feature Designation: Perennial: \_\_\_\_\_ Intermittent: \_\_\_\_\_ Ephemeral: \_\_\_\_\_  
 Natural Drainage: \_\_\_\_\_ Artificial Drainage: \_\_\_\_\_ Navigable Water: \_\_\_\_\_

Remarks: Sample confirmed as upland along topographic slope where indicators of all three parameters are absent; upland pair point to W102-8a.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: _____)				
1				
2				
3				
4				
5				
		0		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5' radius)				
1	Lacser Lactuca serriola	15	YES	FACU
2	Leplat Lepidium latifolium	15	YES	FAC
3	Cirarv Cirsium arvense	10	NO	FACU
4	Sisalt Sisymbrium altissimum	15	YES	FACU
5				
6				
7				
8				
9				
10				
11				
		55		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: _____)				
1				
2				
		0		= Total Cover

% Bare Ground in Herb 45 % Cover of Biotic           

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.3333 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species	0 x 1 =	0
FACW species	0 x 2 =	0
FAC species	15 x 3 =	45
FACU species	40 x 4 =	160
UPL species	0 x 5 =	0
Column Totals:	55 (A)	205 (B)
Prevalence Index = B/A =		3.7273

**Hydrophytic Vegetation Indicators:**

- 1 - Rapid Test for Hydrophytic Vegetation  
 No 2 - Dominance Test is >50%  
 No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☐ No ☒

Remarks: Sample point dominated by FAC and FACU vegetation; does not meet hydrophytic vegetation indicator.



## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #8 City/County: Lassen County Sampling Date: 8/29/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: SP 110-8 Feature ID: W103-8  
 Investigator(s): M. Oats, K. Daniels Section, Township, Range: S29, T29N, R14E  
 Local relief (hillside, terrace, etc.): Terrace Local Relief (concave, convex, none): Convex Slope (%): 1  
 Subregion (LRR): D Lat: 40.33654 Long: -120.42277 Datum: NAD83  
 Soil Map Unit Name: (285) Modoc-Truax complex, 0 to 2 percent slopes NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☒ Yes, or Hydrology ☐ No naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☒ No ☐  
 Hydric Soil Present? Yes ☒ No ☐  
 Wetland Hydrology Present? Yes ☒ No ☐  
 Is the Sampled Area within a Wetland? Yes ☒ No ☐

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour: \_\_\_\_\_ OHWM Mapped: \_\_\_\_\_  
 Feature Designation: Perennial: \_\_\_\_\_ Intermittent: \_\_\_\_\_ Ephemeral: \_\_\_\_\_  
 Natural Drainage: \_\_\_\_\_ Artificial Drainage: \_\_\_\_\_ Navigable Water: \_\_\_\_\_

**Remarks:** Wetland parameters are present as indicated by primary hydrology indicators of water marks and drift deposits (nonriverine) and a dominance of hydrophytic vegetation. Problematic hydric soils are assumed in developing soils of recently inundated area.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)				
1				
2				
3				
4				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: 15' radius)				
1	Salexi Salix exigua	10	YES	FACW
2				
3				
4				
5				
		10	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5' radius)				
1	Leplat Lepidium latifolium	65	YES	FAC
2	Eutoce Euthamia occidentalis	25	YES	FACW
3	Amaalb Amaranthus albus	10	NO	FACU
4				
5				
6				
7				
8				
9				
10				
11				
		100	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

% Bare Ground in Herb \_\_\_\_\_ % Cover of Biotic \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species  
 That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant  
 Species Across All Strata: 3 (B)

Percent of Dominant Species  
 That Are OBL, FACW, or FAC: 1 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species	0 x 1 =	0
FACW species	35 x 2 =	70
FAC species	65 x 3 =	195
FACU species	10 x 4 =	40
UPL species	0 x 5 =	0
Column Totals:	110 (A)	305 (B)
Prevalence Index = B/A =		2.7727

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation  
 Yes 2 - Dominance Test is >50%  
 Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☒ No ☐

**Remarks:** Dominance of hydrophytic vegetation present (FAC and FACW species).



## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #8 City/County: Lassen County Sampling Date: 8/29/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: 111-8 Feature ID: U103-8  
 Investigator(s): M. Oats, K. Daniels Section, Township, Range: S29, T29N, R14E  
 Local relief (hillside, terrace, etc.): Hillside Local Relief (concave, convex, none): Concave Slope (%): 8  
 Subregion (LRR): D Lat: 40.33654 Long: -120.42274 Datum: NAD83  
 Soil Map Unit Name: (285) Modoc-Truax complex, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? ☐ Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? ☐ (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☐ No ☒  
 Hydric Soil Present? Yes ☐ No ☒  
 Wetland Hydrology Present? Yes ☐ No ☒

Is the Sampled Area within a Wetland? Yes ☐ No ☒

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour: \_\_\_\_\_ OHWM Mapped: \_\_\_\_\_  
 Feature Designation: Perennial: \_\_\_\_\_ Intermittent: \_\_\_\_\_ Ephemeral: \_\_\_\_\_  
 Natural Drainage: \_\_\_\_\_ Artificial Drainage: \_\_\_\_\_ Navigable Water: \_\_\_\_\_

Remarks: Sample confirmed as upland along slope where indicators of all three parameters are absent; upland pair point to W103-8.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: _____)				
1				
2				
3				
4				
5				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5' radius)				
1 THINT	Thinopyrum intermedium	40	YES	UPL
2 Helcus	Helianthus cusikii	15	YES	UPL
3 Atrsem	Atriplex semibaccata	20	YES	FAC
4				
5				
6				
7				
8				
9				
10				
11				
		75	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

% Bare Ground in Herb 25 % Cover of Biotic           

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.3333 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>20</u>	x 3 =	<u>60</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>55</u>	x 5 =	<u>275</u>
Column Totals: <u>75</u> (A)		<u>335</u> (B)
Prevalence Index = B/A =		<u>4.4667</u>

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation  
 No 2 - Dominance Test is >50%  
 No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☐ No ☒

Remarks: Sample point dominated by FAC and UPL vegetation.



SOIL								
						Sampling Point:	111-8	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-10	10 YR 3/2	100					Sandy loam	roadfill at 10 inches
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)								
Histosol (A1) _____		Sandy Redox (S5) _____		Indicators for Problematic Hydric Soils <sup>3</sup> :				
Histic Epipedon (A2) _____		Stripped Matrix (S6) _____		1 cm Muck (A9) ( <b>LRR C</b> )				
Black Histic (A3) _____		Loamy Mucky Mineral (F1) _____		_____ 2 cm Muck (A10) ( <b>LRR B</b> )				
Hydrogen Sulfide (A4) _____		Loamy Gleyed Matrix (F2) _____		_____ Reduced Vertic (F18)				
Stratified Layers (A5) ( <b>LRR C</b> ) _____		Depleted Matrix (F3) _____		_____ Red Parent Material (TF2)				
1 cm Muck (A9) ( <b>LRR D</b> ) _____		Redox Dark Surface (F6) _____		_____ Other (Explain in Remarks)				
Depleted Below Dark Surface (A11) _____		Depleted Dark Surface (F7) _____						
Thick Dark Surface (A12) _____		Redox Depressions (F8) _____						
Sandy Mucky Mineral (S1) _____		Vernal Pools (F9) _____						
Sandy Gleyed Matrix (S4) _____								
						<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
Restrictive Layer (if present):						Hydric Soil Present?		
Type: _____ Roadfill						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Depth (inches): _____ 10								
Remarks: Soil pit lacks hydric soil indicators above restrictive layer along transition area lacking wetland hydrology and hydrophytic vegetation.								
HYDROLOGY								
Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)				
Primary Indicators (minimum of one required; check all that apply)								
Surface Water (A1) _____		Salt Crust (B11) _____		Water Marks (B1) ( <b>Riverine</b> ) _____				
High Water Table (A2) _____		Biotic Crust (B12) _____		Sediment Deposits (B2) ( <b>Riverine</b> ) _____				
Saturation (A3) _____		Aquatic Invertebrates (B13) _____		Drift Deposits (B3) ( <b>Riverine</b> ) _____				
Water Marks (B1) ( <b>Nonriverine</b> ) _____		Hydrogen Sulfide Odor (C1) _____		Drainage Patterns (B10) _____				
Sediment Deposits (B2) ( <b>Nonriverine</b> ) _____		Oxidized Rhizospheres along Living Roots (C3) _____		Dry-Season Water Table (C2) _____				
Drift Deposits (B3) ( <b>Nonriverine</b> ) _____		Presence of Reduced Iron (C4) _____		Crayfish Burrows (C8) _____				
Surface Soil Cracks (B6) _____		Recent Iron Reduction in Tilled Soils (C6) _____		Saturation Visible on Aerial Imagery (CS) _____				
Inundation Visible on Aerial Imagery (B7) _____		Thin Muck Surface (C7) _____		Shallow Aquitard (D3) _____				
Water-Stained Leaves (B9) _____		Other (Explain in Remarks) _____		FAC-Neutral Test (D5) _____				
Field Observations:						Wetland Hydrology Present?		
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/>		Depth (inches): _____ NA		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Water Table Present? Yes _____ No <input checked="" type="checkbox"/>		Depth (inches): _____ NA						
Saturation Present? Yes _____ No <input checked="" type="checkbox"/> (includes capillary fringe)		Depth (inches): _____ NA						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks: No hydrology indicators observed.								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #8 City/County: Lassen County Sampling Date: 8/29/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: SP 113-8 Feature ID: W105-8  
 Investigator(s): M. Oats, K. Daniels Section, Township, Range: S14, T28N, R13E  
 Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRRN) D Lat: 40.28719 Long: -120.48141 Datum: NAD83  
 Soil Map Unit Name: (386) Truckee loam, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? ☐ Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? ☐ (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☒ No ☐  
 Hydric Soil Present? Yes ☒ No ☐  
 Wetland Hydrology Present? Yes ☒ No ☐

Is the Sampled Area within a Wetland? Yes ☒ No ☐

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour: \_\_\_\_\_ OHWM Mapped: \_\_\_\_\_  
 Feature Designation: Perennial: \_\_\_\_\_ Intermittent: \_\_\_\_\_ Ephemeral: \_\_\_\_\_  
 Natural Drainage: \_\_\_\_\_ Artificial Drainage: \_\_\_\_\_ Navigable Water: \_\_\_\_\_

**Remarks:** Wetland parameters are present as indicated by hydrology primary indicator sediment deposits (nonriverine), hydric soils (redox dark surface), and a dominance of hydrophytic vegetation.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: _____)				
1				
2				
3				
4				
5				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5' radius)				
1 Jundub	Juncus dubius	35	YES	FACW
2 Acname	Acmispon americanus	10	NO	UPL
3 Carneb	Carex nebrascensis	5	NO	OBL
4 Phlpra	Phleum pratense	5	NO	FACU
5 Leytri	Leymus triticoides	10	NO	FAC
6 Trifra	Trifolium fragiferum	25	YES	FAC
7 Rumcri	Rumex crispus	10	NO	FAC
8				
9				
10				
11				
		100	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

% Bare Ground in Herb  0 % Cover of Biotic

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC:  2 (A)

Total Number of Dominant Species Across All Strata:  2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC:  1 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species	5	x 1 = 5
FACW species	35	x 2 = 70
FAC species	45	x 3 = 135
FACU species	5	x 4 = 20
UPL species	10	x 5 = 50
Column Totals:	100 (A)	280 (B)
Prevalence Index = B/A =		2.8

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation  
 Yes 2 - Dominance Test is >50%  
 Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☒ No ☐

**Remarks:** Dominance of hydrophytic vegetation present (FAC and FACW species).

SOIL							Sampling Point: SP 113-8	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	10YR 2/2	100					Sandy loam	Roots throughout
3-9	10 YR 2/2	90	7.5 YR 4/6	10	C	PL	Sandy loam	Prominent redox concentrations
9-16	10 YR 2/2	90	7.5 YR 4/6	10	C	PL	Loamy sand	Lots of small rocks; Prominent redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)				<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>	
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)				<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )	
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)				<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )	
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)				<input type="checkbox"/> Reduced Vertic (F18)	
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)				<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> Redox Dark Surface (F6)				<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
							<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: <input type="text" value="None"/>						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Depth (inches): <input type="text" value="NA"/>								
<b>Remarks:</b> Hydric soil indicator F6 (Redox dark surface) met by at least 5% prominent redox concentrations occurring as pore linings in a layer at least 4 inches thick starting in the upper 8 inches of soil.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input checked="" type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Depth (inches): <input type="text" value="NA"/>			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Depth (inches): <input type="text" value="NA"/>					
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (includes capillary fringe)			Depth (inches): <input type="text" value="NA"/>					
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology present as evidenced by sediment deposits (Nonriverine), indicating recent inundation.								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #8 City/County: Lassen County Sampling Date: 8/29/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: SP 114-8 Feature ID: U105-8  
 Investigator(s): M. Oats, K. Daniels Section, Township, Range: S14, T28N, R13E  
 Local relief (hillside, terrace, etc.): Roadslope Local Relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR): D Lat: 40.28723 Long: -120.48151 Datum: NAD83  
 Soil Map Unit Name: (386) Truckee loam, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? ☐ Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? ☐ (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☐ No ☒  
 Hydric Soil Present? Yes ☐ No ☒  
 Wetland Hydrology Present? Yes ☐ No ☒

Is the Sampled Area within a Wetland? Yes ☐ No ☒

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour \_\_\_\_\_ OHWM Mapped \_\_\_\_\_  
 Feature Designation: Perennial \_\_\_\_\_ Intermittent \_\_\_\_\_ Ephemeral \_\_\_\_\_  
 Natural Drainage \_\_\_\_\_ Artificial Drainage \_\_\_\_\_ Navigable Water \_\_\_\_\_

Remarks: Sample confirmed as upland along slope where indicators of all three parameters are absent; upland pair point to W105-8.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
1 Roscal	Rosa californica	10	YES	FAC
2				
3				
4				
5				
		10	= Total Cover	

Herb Stratum (Plot size: 5' radius)	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
1 Madele	Madia elegans	15	YES	UPL
2 Lacser	Lactuca serriola	10	NO	FACU
3 Metalb	Melilotus albus	10	NO	UPL
4 Medsat	Medicago sativa	25	YES	UPL
5				
6				
7				
8				
9				
10				
11				
		60	= Total Cover	

Woody Vine Stratum (Plot size: _____)	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
1				
2				
		0	= Total Cover	

% Bare Ground in Herb  40 % Cover of Biotic

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC:  1 (A)

Total Number of Dominant Species Across All Strata:  3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC:  0.3333 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	10	x 3 = 30
FACU species	10	x 4 = 40
UPL species	50	x 5 = 250
Column Totals:	70 (A)	320 (B)
Prevalence Index = B/A = 4.5714		

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation  
 No 2 - Dominance Test is >50%  
 No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☐ No ☒

Remarks: Sample point dominated by FAC and UPL vegetation.

[illegible]

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #8 City/County: Lassen County Sampling Date: 9/11/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: SP 202-8 Feature ID: NW200-8  
 Investigator(s): M. Oats, T. Kayatsky, P. Ferral Section, Township, Range: S23, T32N, R15E  
 Local relief (hillside, terrace, etc.): Hillside Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 40.27587 Long: -120.48327 Datum: NAD83  
 Soil Map Unit Name: (287) Mottsville loamy coarse sand, 2 to 9 percent slopes NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☒ No ☐  
 Hydric Soil Present? Yes ☐ No ☒  
 Wetland Hydrology Present? Yes ☐ No ☒

Is the Sampled Area within a Wetland? Yes ☐ No ☒

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour: \_\_\_\_\_ OHWM Mapped: \_\_\_\_\_  
 Feature Designation: Perennial: \_\_\_\_\_ Intermittent: \_\_\_\_\_ Ephemeral: \_\_\_\_\_  
 Natural Drainage: \_\_\_\_\_ Artificial Drainage: \_\_\_\_\_ Navigable Water: \_\_\_\_\_

**Remarks:** Suspect area within previously mapped NWI feature confirmed as upland where hydric soil indicators and indicators of wetland hydrology are absent. Hydrophytic vegetation is found scattered with upland species lacking recent or regular drainage patterns.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: 15 foot radius)				
1	Sallas	10	YES	FACW
2	Salix lasiandra			
3				
4				
5				
		10	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5 foot radius)				
1	Elyrep	40	YES	FAC
2	Ivaaxi	10	NO	FAC
3	Helann	6	NO	FACU
4	Epibra	5	NO	UPL
5				
6				
7				
8				
9				
10				
11				
		61	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

% Bare Ground in Herb 20 % Cover of Biotic 0

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species	0	x 1 = 0
FACW species	10	x 2 = 20
FAC species	50	x 3 = 150
FACU species	6	x 4 = 24
UPL species	5	x 5 = 25
Column Totals:	71 (A)	219 (B)
Prevalence Index = B/A =		3.0845

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation  
 Yes 2 - Dominance Test is >50%  
 No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☒ No ☐

**Remarks:** Dominance of hydrophytic vegetation is present.

SOIL						Sampling Point: SP 202-8		
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	2.5Y 4/3	100					Sand	No redox
8-10	10YR 4/2	100					Sand	No redox
10-13	10YR 3/2	100					Loamy sand	No redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<div style="display: flex; justify-content: space-between;"> <div> <b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>  <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Redox (S5)  <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Stripped Matrix (S6)  <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Loamy Mucky Mineral (F1)  <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Gleyed Matrix (F2)  <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> Depleted Matrix (F3)  <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Redox Dark Surface (F6)  <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Depleted Dark Surface (F7)  <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Redox Depressions (F8)  <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Vernal Pools (F9)  <input type="checkbox"/> Sandy Gleyed Matrix (S4) </div> <div style="text-align: right;"> <b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>  <input type="checkbox"/> 1 cm Muck (A9) (LRR C)  <input type="checkbox"/> 2 cm Muck (A10) (LRR B)  <input type="checkbox"/> Reduced Vertic (F18)  <input type="checkbox"/> Red Parent Material (TF2)  <input type="checkbox"/> Other (Explain in Remarks) </div> </div>								
<b>Restrictive Layer (if present):</b> Type: <input type="checkbox"/> None Depth (inches): <input type="checkbox"/> NA						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Hydric soil indicators not observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)						Secondary Indicators (2 or more required)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)						
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)						
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)						
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)						
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)						
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)						
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)						
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)						
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)						
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="checkbox"/> NA Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="checkbox"/> NA Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="checkbox"/> NA (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

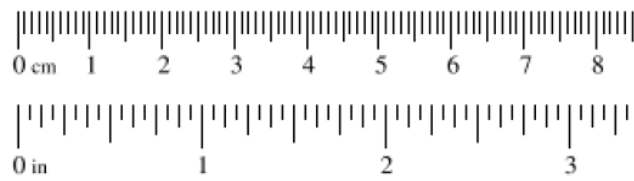
# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 001-9		<b>Feature ID:</b> D001-9		<b>Date:</b> 8/29/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Williams, J. Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Adjacent to US 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.20632, -120.41596		
<b>Potential anthropogenic influences on the channel system:</b> Culverting and roadway construction.					
<b>Brief site description:</b> Intermittent stream flowing from two 48-inch culverts under highway.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

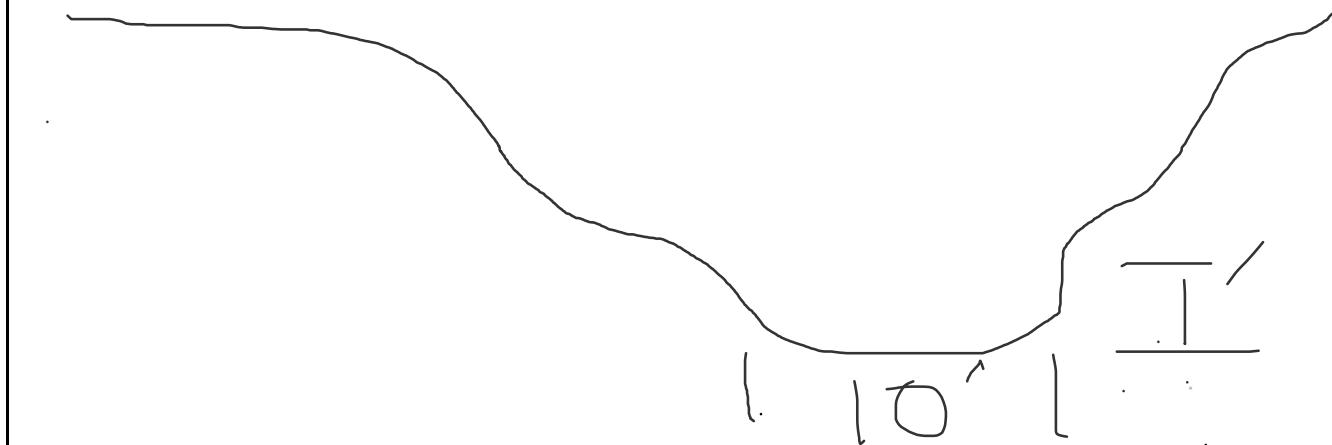


Feature ID: D001-9

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an intermittent stream.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Silty clay

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

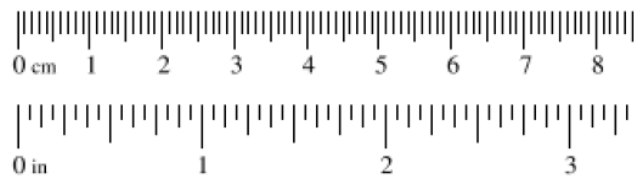
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 002-9		<b>Feature ID:</b> D002-9		<b>Date:</b> 8/29/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Williams, J. Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to US 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.20923, -120.41912		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
<b>Potential anthropogenic influences on the channel system:</b> Culverting and roadway construction and agriculture.					
<b>Brief site description:</b> Intermittent stream flowing from single 48-inch culvert under highway.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>  </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay



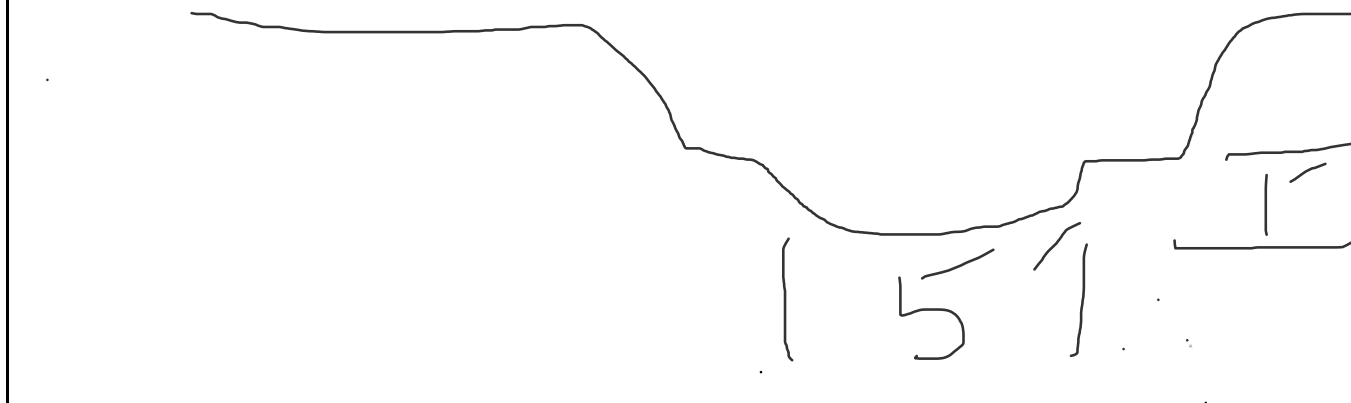
Feature ID: D002-9

Cross section ID:

Date:

Time:

Cross section drawing:



OHWM

GPS point: \_\_\_\_\_

**Indicators:**

☒ Change in average sediment texture

☐ Change in vegetation species

☒ Change in vegetation cover

☒ Break in bank slope

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

**Comments:**

Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an intermittent stream.

Floodplain unit:

☒ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: Silty clay

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA

☒ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☒ Presence of bed and bank

☐ Benches

☐ Soil development

☒ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 003-9		<b>Feature ID:</b> D003-9		<b>Date:</b> 8/29/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Williams, J. Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to US 395		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 40.21689, -120.42742		
<b>Potential anthropogenic influences on the channel system:</b> Culverting and roadway construction.					
<b>Brief site description:</b> Ephemeral stream flowing from single 9-foot culvert under highway.					
<b>Checklist of resources (if available):</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies:					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			



### Wentworth Size Classes

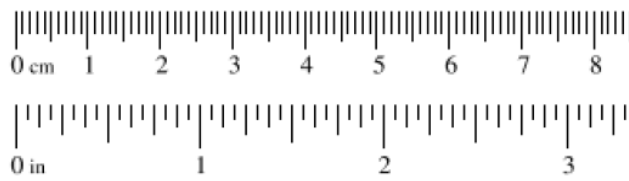
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud

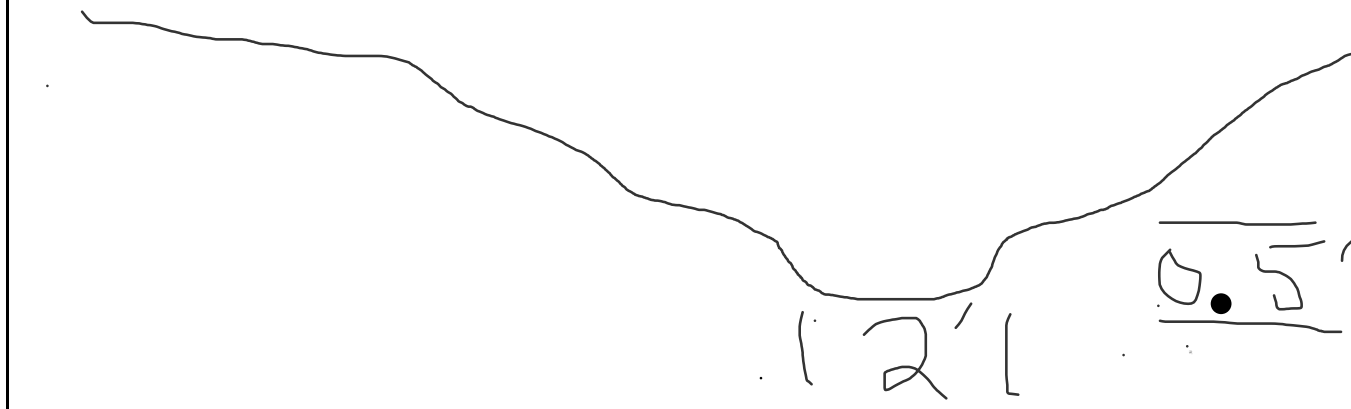


Feature ID: D003-9

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

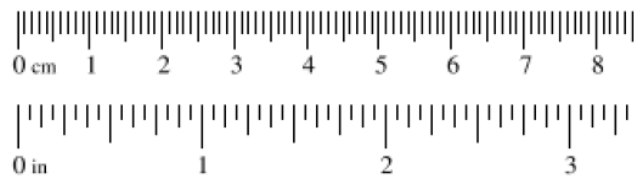
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 004-9		<b>Feature ID:</b> D004-9		<b>Date:</b> 8/29/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Williams, J. Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to US 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.22023, -120.43108		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
<b>Potential anthropogenic influences on the channel system:</b> Culverting and roadway construction.					
<b>Brief site description:</b> Intermittent stream flowing from single 36-inch culvert under highway.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>  </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.           <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:           <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer           </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:           </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

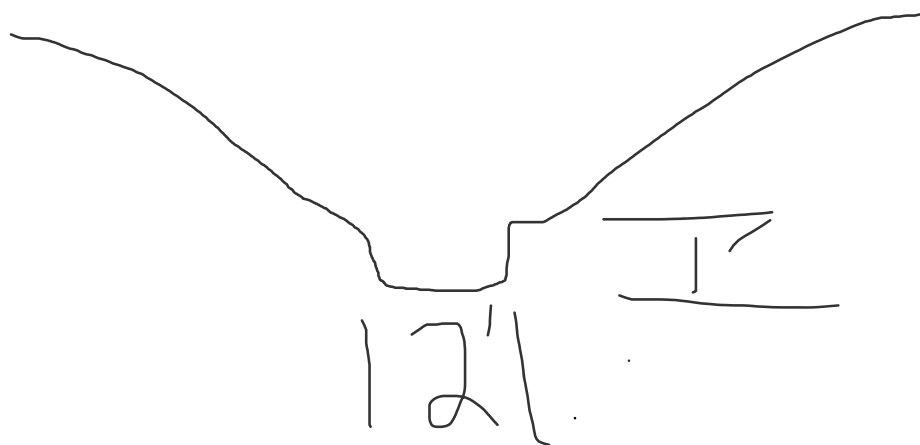


Feature ID: D004-9

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

## Indicators:



Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

## Comments:

Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

## Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

## Indicators:



Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



Other: \_\_\_\_\_

## Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b><u>Floodplain unit:</u></b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b><u>Floodplain unit:</u></b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

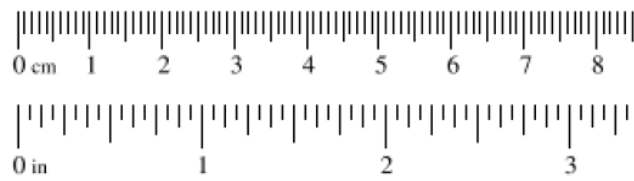
# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 005-9		<b>Feature ID:</b> D005-9		<b>Date:</b> 8/29/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Williams, J. Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to US 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.22899, -120.44061		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
<b>Potential anthropogenic influences on the channel system:</b> Culverting and roadway construction.					
<b>Brief site description:</b> Intermittent stream flowing from single 48-inch culvert under highway - culvert opening is only 24 inches due to sediment in the culvert.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery         </div> <div> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> </div> </div> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div> <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>  </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay



Feature ID: D005-9

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

**Indicators:**☒

Change in average sediment texture

☐

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

Floodplain unit:☒

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☒

NA

☐

Early (herbaceous &amp; seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☒

Presence of bed and bank

☐

Benches

☐

Soil development

☒

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b><u>Floodplain unit:</u></b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

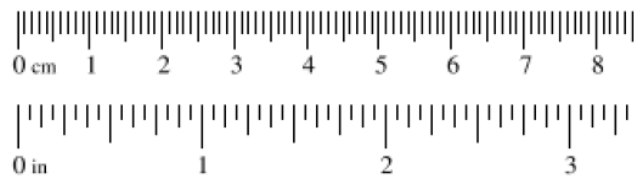
<b><u>Floodplain unit:</u></b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 006-9		<b>Feature ID:</b> D006-9		<b>Date:</b> 8/29/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Williams, J. Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to US 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.23202, -120.44373		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
<b>Potential anthropogenic influences on the channel system:</b> Culverting and roadway construction.					
<b>Brief site description:</b> Intermittent stream flowing from two 42x57-inch culverts under highway - large boulder-size rip-rap placed at culvert outlet.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery         </div> <div> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> </div> </div> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div> <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>  </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay



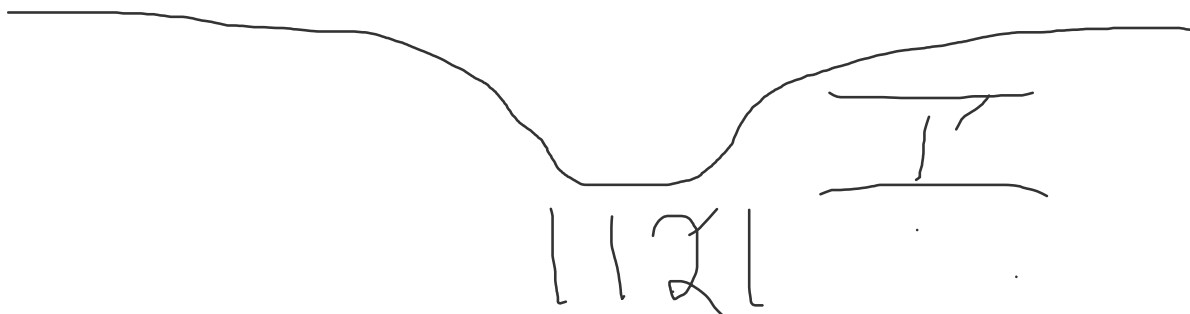
Feature ID: D006-9

Cross section ID:

Date:

Time:

Cross section drawing:



OHWM

GPS point: \_\_\_\_\_

**Indicators:**

- ☒ Change in average sediment texture  
☐ Change in vegetation species  
☒ Change in vegetation cover

- ☒ Break in bank slope  
☒ Other: Drift deposits  
☐ Other: \_\_\_\_\_

**Comments:**

Defined bed and bank feature. OHWM evidenced by change in sediment texture, break in bank slope, drift deposits, and change in vegetation cover. Sampling point documents an intermittent stream.

Floodplain unit:

☒ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

- ☐ NA  
☒ Early (herbaceous & seedlings)  
☐ Mid (herbaceous, shrubs, saplings)  
☐ Late (herbaceous, shrubs, mature trees)

**Indicators:**

- ☐ Mudcracks  
☐ Ripples  
☐ Drift and/or debris  
☒ Presence of bed and bank  
☐ Benches  
☐ Soil development  
☒ Surface relief  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b><u>Floodplain unit:</u></b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b><u>Floodplain unit:</u></b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

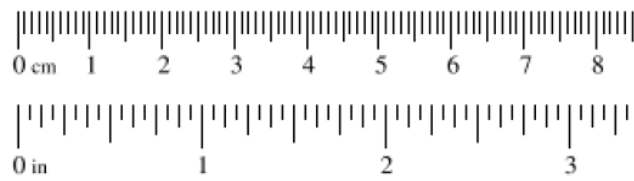
# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 007-9		<b>Feature ID:</b> D007-9		<b>Date:</b> 8/29/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Williams, J. Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Adjacent to US 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.23507, -120.44670		
<b>Potential anthropogenic influences on the channel system:</b> Culverting and roadway construction.					
<b>Brief site description:</b> Intermittent stream flowing from 36-inch culvert under highway - large rip-rap placed at culvert outlet.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

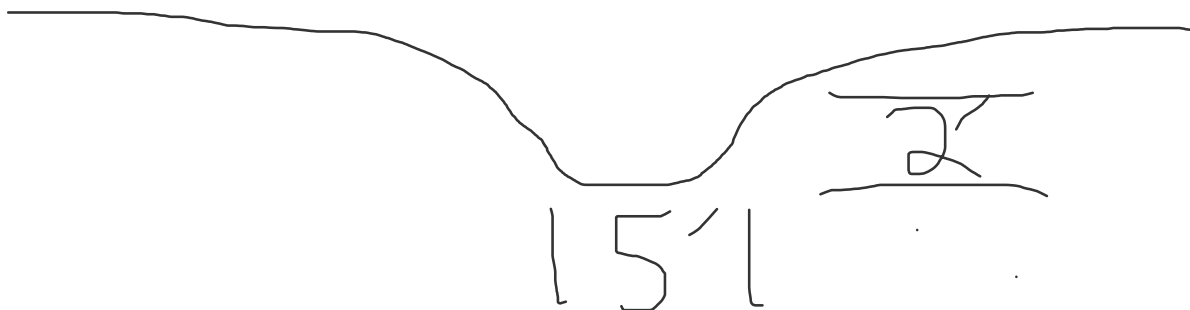


Feature ID: D007-9

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: Drift deposits



Other: \_\_\_\_\_

**Comments:**

Defined bed and bank feature. OHWM evidenced by change in sediment texture, break in bank slope, drift deposits, and change in vegetation cover. Sampling point documents an intermittent stream.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



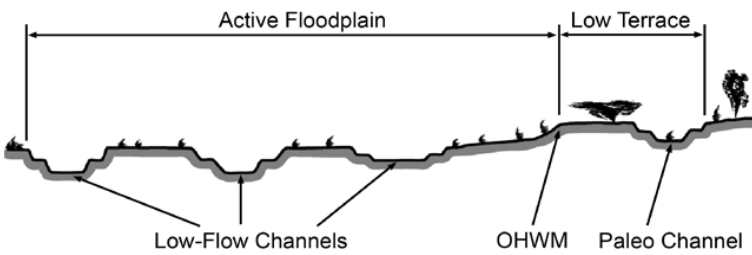
Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

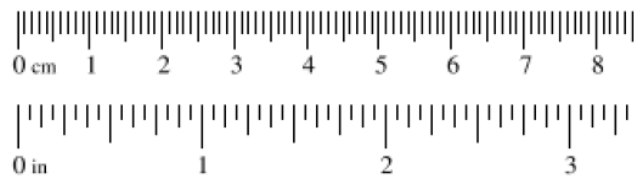
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
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<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 008-9		<b>Feature ID:</b> D008-9		<b>Date:</b> 8/29/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Williams, J. Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Adjacent to US 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.17987, -120.38496		
<b>Potential anthropogenic influences on the channel system:</b> Culverting and roadway construction. Piped discharge provides flow for irrigation canal below culvert outlet at ROW fence. No flow from culvert or upstream reach.					
<b>Brief site description:</b> Stream is flowing due to piped discharge below culvert under highway - wetland area on either side of the canal is outside of ROW limits.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
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1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

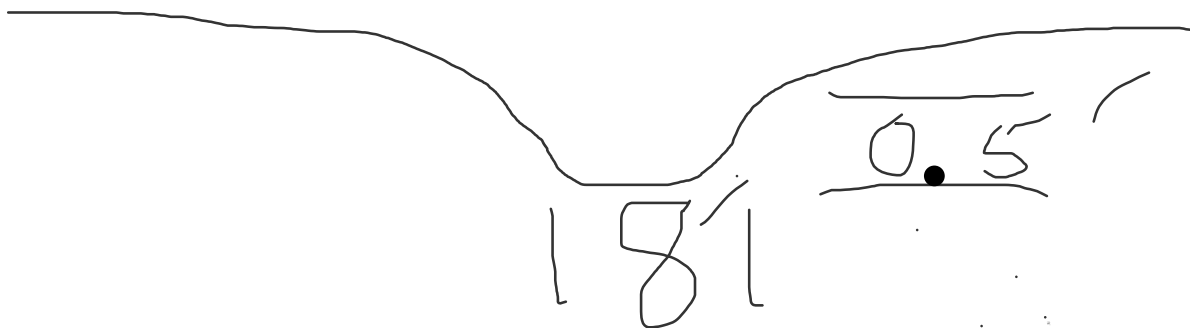


Feature ID: D008-9

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

Constructed bed and bank feature. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an irrigation canal.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



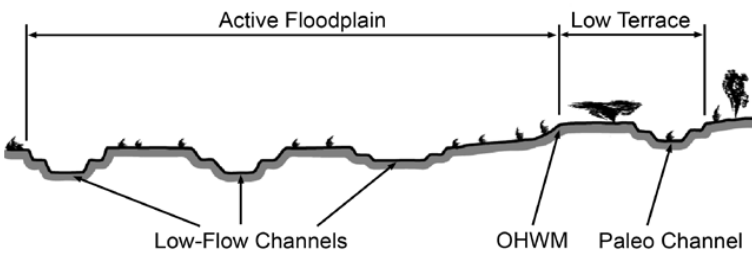
Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b><u>Floodplain unit:</u></b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b><u>Floodplain unit:</u></b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

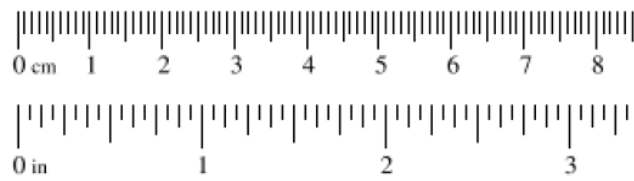
# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 009-9		<b>Feature ID:</b> D009-9		<b>Date:</b> 8/29/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Williams, J. Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to US 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.18603, -120.39333			
<b>Potential anthropogenic influences on the channel system:</b> Culverting and roadway construction.					
<b>Brief site description:</b> Intermittent stream flowing from 18-inch culvert under highway.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay



Feature ID: D009-9

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents in ephemeral stream.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



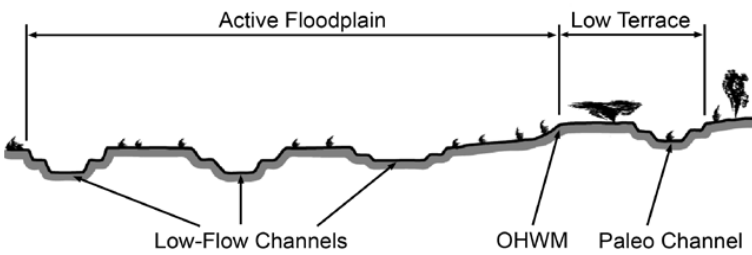
Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

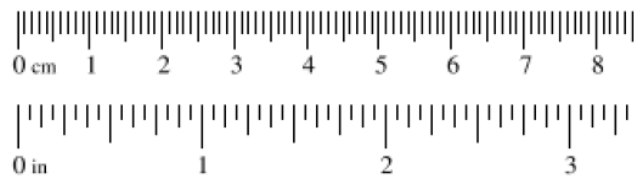
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 010-9		<b>Feature ID:</b> D010-9		<b>Date:</b> 8/29/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Williams, J. Ahn					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Adjacent to US 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.18949, -120.39728		
<b>Potential anthropogenic influences on the channel system:</b> Culverting and roadway construction.					
<b>Brief site description:</b> Ephemeral channel flowing from 18-inch culvert under highway - channel parallels roadway a short distance.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input type="checkbox"/> Mapping on aerial photograph             <input checked="" type="checkbox"/> GPS             <input type="checkbox"/> Digitized on computer             <input type="checkbox"/> Other:             </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

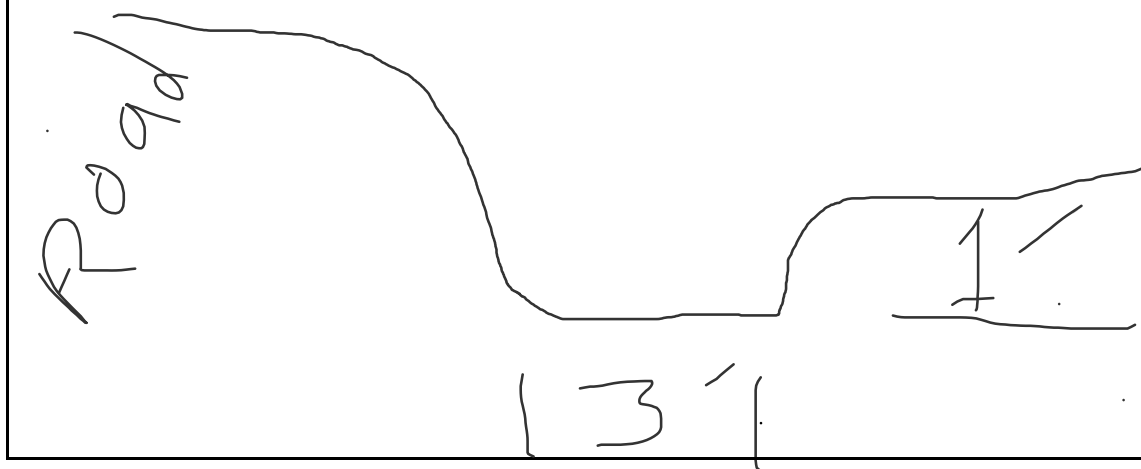


Feature ID: D010-9

Cross section ID:

Date:

Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

Feature ID:

Cross section ID:

Date:

Time:

**Floodplain unit:**

☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Mid (herbaceous, shrubs, saplings)

☐

Early (herbaceous & seedlings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐

Mudcracks

☐

Soil development

☐

Ripples

☐

Surface relief

☐

Drift and/or debris

☐

Other: \_\_\_\_\_

☐

Presence of bed and bank

☐

Other: \_\_\_\_\_

☐

Benches

☐

Other: \_\_\_\_\_

**Comments:**

**Floodplain unit:**

☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Mid (herbaceous, shrubs, saplings)

☐

Early (herbaceous & seedlings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐

Mudcracks

☐

Soil development

☐

Ripples

☐

Surface relief

☐

Drift and/or debris

☐

Other: \_\_\_\_\_

☐

Presence of bed and bank

☐

Other: \_\_\_\_\_

☐

Benches

☐

Other: \_\_\_\_\_

**Comments:**

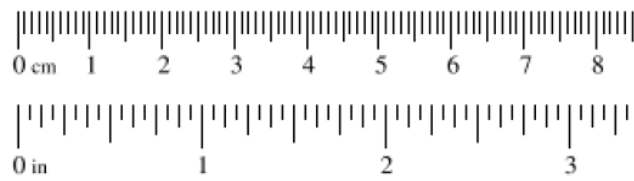
# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 013-9		<b>Feature ID:</b> D011-9		<b>Date:</b> 8/30/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Williams, T. Kayatsky					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to US 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.19960, -120.40839		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
<b>Potential anthropogenic influences on the channel system:</b> Culverting and roadway construction.					
<b>Brief site description:</b> Ephemeral stream flowing under culvert perpendicular to highway.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>  </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

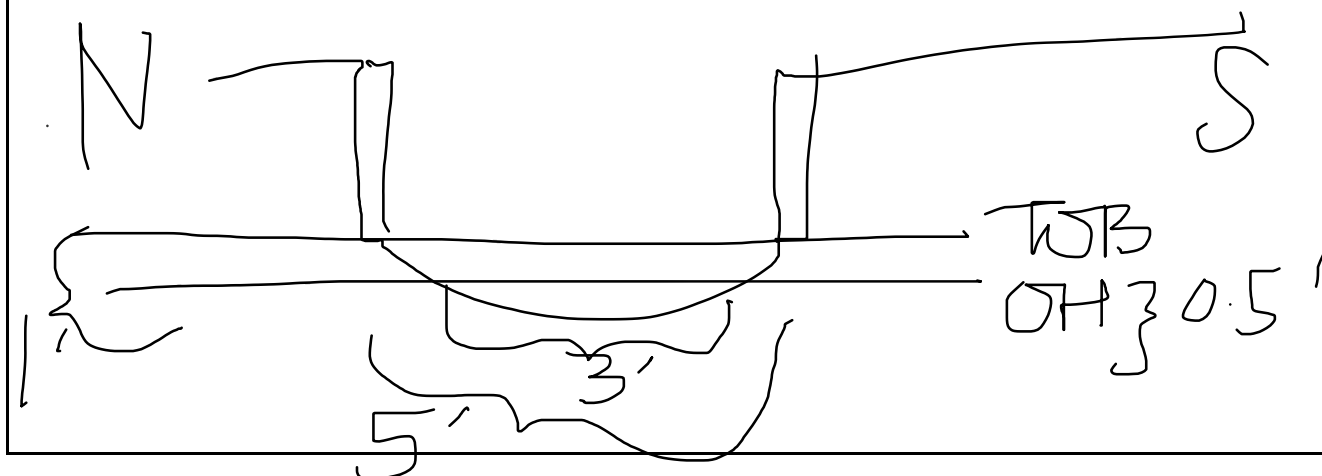


Feature ID: D011-9

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:

- ☒ Change in average sediment texture  
☐ Change in vegetation species  
☒ Change in vegetation cover

- ☒ Break in bank slope  
☒ Other: Some sediment sorting  
☐ Other: \_\_\_\_\_

Comments:

Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sediment sorting observed. Sampling point documents an ephemeral stream.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: Silty clay

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

- ☒ NA  
☐ Early (herbaceous & seedlings)  
☐ Mid (herbaceous, shrubs, saplings)  
☐ Late (herbaceous, shrubs, mature trees)

Indicators:

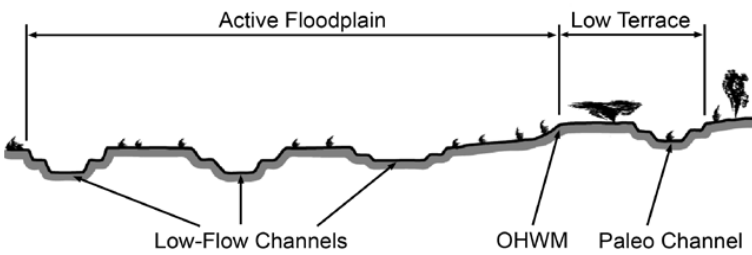
- ☐ Mudcracks  
☐ Ripples  
☐ Drift and/or debris  
☒ Presence of bed and bank  
☐ Benches  
☐ Soil development  
☒ Surface relief  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 014-9		<b>Feature ID:</b> D012-9		<b>Date:</b> 8/30/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Williams, T. Kayatsky					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to US 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.20147, 120.41032		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
<b>Potential anthropogenic influences on the channel system:</b> Culverting, fencing and roadway construction.					
<b>Brief site description:</b> Ephemeral stream flowing under 2 culverts perpendicular to highway.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>   </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

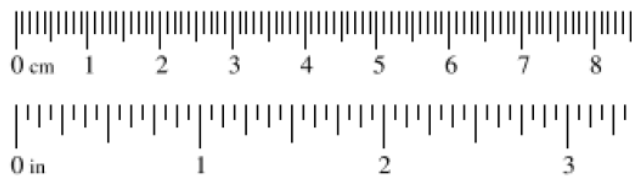
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud

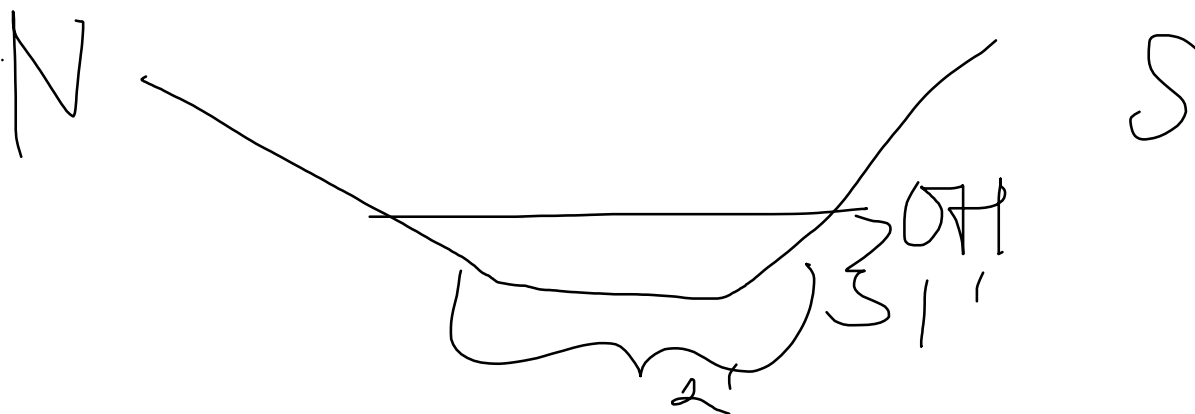


Feature ID: D012-9

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Silty clay

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

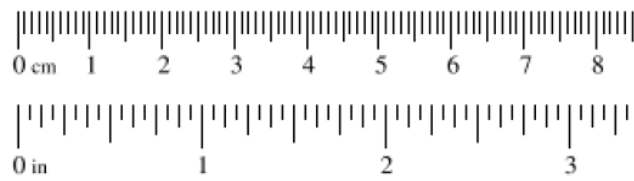
# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 015-9		<b>Feature ID:</b> D13-9		<b>Date:</b> 8/30/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Williams, T. Kayatsky					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Adjacent to US 395		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 40.20368, -120.41298		
<b>Potential anthropogenic influences on the channel system:</b> Culverting, fencing and roadway construction.					
<b>Brief site description:</b> Ephemeral stream flowing under culverts perpendicular to highway.					
<b>Checklist of resources (if available):</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> ESRI GIS imagery		<b>Gage number:</b>			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies:					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

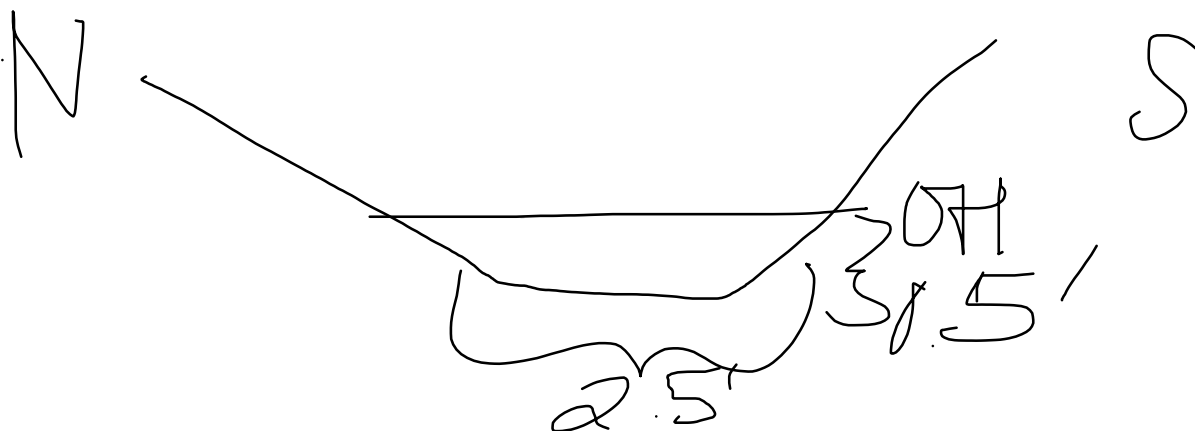


Feature ID: D013-9

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Silty clay

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Sampling Point: SP 011-9

Feature ID: W001-9

Project/Site: Zayo Fiberoptic Interconnect Project, Group #8

City/County: Lassen County

Sampling Date: 8/29/2019

Applicant/Owner: Zayo Group

State: California

Investigator(s): M. Williams, J. Ahn

Section, Township, Range: S16, T27N, R14E

Local relief (hillside, terrace, etc.): Hillslope

Local Relief (concave, convex, none): Concave

Slope (%): 2

Subregion (LRR): D

Lat: 40.19376

Long: -120.40185

Datum: NAD83

Soil Map Unit Name: (287) Mottsville loamy coarse sand, 2 to 9 percent slopes

NW1 classification: PSSC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)Are Vegetation ☐ N, Soil ☐ N, or Hydrology ☐ N significantly disturbed? ☐ Are "Normal Circumstances" present? Yes ☒ No ☐Are Vegetation ☐ N, Soil ☐ N, or Hydrology ☐ N naturally problematic? ☐ (If needed, explain any answers in Remarks.)**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**Hydrophytic Vegetation Present? Yes ☒ No ☐Hydric Soil Present? Yes ☒ No ☐Wetland Hydrology Present? Yes ☒ No ☐Is the Sampled Area  
within a Wetland?Yes ☒ No ☐

**Remarks:** Strong groundwater presence at site. Wetland parameters present and indicated by dominance of hydrophytic vegetation, hydric soil indicator F6 (redox dark surface), and primary indicators of wetland hydrology. Unidentifiable species present in large quantity onsite and was conservatively considered FAC or wetter.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: _____)				
1				
2				
3				
4				
5				
		0	= Total Cover	

Herb Stratum	(Plot size: 5 foot radius )			
1 leplat	Lepidium latifolium	70	YES	FAC
2 Mimgut	Mimulus guttatus	10	NO	OBL
3 Polmon	Polypogon monspeliensis	5	NO	FACW
4				
5				
6				
7				
8				
9				
10				
11				
		85	= Total Cover	

Woody Vine Stratum	(Plot size: _____)	_____	_____	_____
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb

% Cover of Biotic

Stratum: 10

Crust: 8

**Dominance Test worksheet:**

Number of Dominant Species

That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant

Species Across All Strata: 1 (B)

Percent of Dominant Species

That Are OBL, FACW, or FAC: 100% (A/B)

**Prevalence Index worksheet:**

Total % Cover of: Multiply by:

OBL species 10 x 1 = 10

FACW species 5 x 2 = 10

FAC species 70 x 3 = 210

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 85 (A) 230 (B)

Prevalence Index = B/A = 2.7059

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is &gt;50%

Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)5 - Wetland Non-Vascular Plants<sup>1</sup>6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic  
Vegetation**

Present?

Yes ☒ No ☐

**Remarks:** Site is dominated by hydrophytic vegetation. Unknown species at large quantity (i.e. 70%) observed on site and conservatively considered as FAC or wetter.

SOIL		Sampling Point: SP 011-9							
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix		Redox Features				Texture	Remarks	
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>			
0-16	10YR 3/2	70	5YR 4/4	10	C	M	Sandy Loam	Prominent redox concentrations	
0-16	10YR 4/4	15					Sand		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)									
Histosol (A1)			Sandy Redox (S5)			Indicators for Problematic Hydric Soils <sup>3</sup> :			
Histic Epipedon (A2)			Stripped Matrix (S6)			1 cm Muck (A9) (LRR C)			
Black Histic (A3)			Loamy Mucky Mineral (F1)			2 cm Muck (A10) (LRR B)			
Hydrogen Sulfide (A4)			Loamy Gleyed Matrix (F2)			Reduced Vertic (F18)			
Stratified Layers (A5) (LRR C)			Depleted Matrix (F3)			Red Parent Material (TF2)			
1 cm Muck (A9) (LRR D)			X Redox Dark Surface (F6)			Other (Explain in Remarks)			
Depleted Below Dark Surface (A11)			Depleted Dark Surface (F7)						
Thick Dark Surface (A12)			Redox Depressions (F8)						
Sandy Mucky Mineral (S1)			Vernal Pools (F9)						
Sandy Gleyed Matrix (S4)						<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.			
Restrictive Layer (if present):						Hydric Soil Present?			
Type: None						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Depth (inches): NA									
Remarks: Hydric soil indicator F6 (redox dark surface) met by prominent redox concentrations of at least 5 % occurring as soft masses in a layer at least 4 inches thick and starting in the upper 8 inches of soil.									
HYDROLOGY									
Wetland Hydrology Indicators:						Secondary Indicators (2 or more required)			
Primary Indicators (minimum of one required; check all that apply)						Water Marks (B1) (Riverine)			
Surface Water (A1)			Salt Crust (B11)			Sediment Deposits (B2) (Riverine)			
High Water Table (A2)			Biotic Crust (B12)			Drift Deposits (B3) (Riverine)			
Saturation (A3)			Aquatic Invertebrates (B13)			X Drainage Patterns (B10)			
X Water Marks (B1) (Nonriverine)			Hydrogen Sulfide Odor (C1)			Dry-Season Water Table (C2)			
Sediment Deposits (B2) (Nonriverine)			Oxidized Rhizospheres along Living Roots (C3)			Crayfish Burrows (C8)			
Drift Deposits (B3) (Nonriverine)			Presence of Reduced Iron (C4)			Saturation Visible on Aerial Imagery (C9)			
Surface Soil Cracks (B6)			Recent Iron Reduction in Tilled Soils (C6)			Shallow Aquitard (D3)			
Inundation Visible on Aerial Imagery (B7)			Thin Muck Surface (C7)			* FAC-Neutral Test (D5)			
X Water-Stained Leaves (B9)			Other (Explain in Remarks)						
Field Observations:						Wetland Hydrology Present?			
Surface Water Present?		Yes	No	X	Depth (inches):	NA			
Water Table Present?		Yes	No	X	Depth (inches):	NA			
Saturation Present?		Yes	No	X	Depth (inches):	NA			
(includes capillary fringe)						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
Remarks: Primary indicators (water marks and stained leaves) are present showing recent inundation. Secondary indicator of drainage pattern is also present. *It is likely that unidentifiable dominant species is wetter than FAC and would then satisfy secondary indicators.									

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Sampling Point: SP 012-9

Feature ID: U001-9

Project/Site: Zayo Fiberoptic Interconnect Project, Group #8

City/County: Lassen County

Sampling Date: 8/29/2019

Applicant/Owner: Zayo Group

State: California

Investigator(s): M. Williams, J. Ahn

Section, Township, Range: S16, T27N, R14E

Local relief (hillside, terrace, etc.): Hill slope

Local Relief (concave, convex, none): Convex

Slope (%): 3

Subregion (LRR): D Lat: 40.19369

Long: -120.40182

Datum: NAD83

Soil Map Unit Name: (287) Mottsville loamy coarse sand, 2 to 9 percent slopes

NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? ☐ Are "Normal Circumstances" present? Yes ☒ No ☐Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? ☐ (If needed, explain any answers in Remarks.)**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**Hydrophytic Vegetation Present? Yes ☐ No ☒Hydric Soil Present? Yes ☐ No ☒Wetland Hydrology Present? Yes ☐ No ☒Is the Sampled Area  
within a Wetland?Yes ☐ No ☒**Remarks:** Sample confirmed as upland along slope where indicators of all three parameters are absent; upland pair point to W001-9.**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30)				
1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 foot radius)				
1 Purtri	Purshia tridentata	20	YES	UPL
2 Arttri	Artemisia tridentata	30	YES	UPL
3				
4				
5				
		50	= Total Cover	

Herb Stratum (Plot size: 5 foot radius)				
1 Brotec	Bromus tectorum	30	YES	UPL
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		30	= Total Cover	

Woody Vine Stratum (Plot size: )				
1				
2				
		0	= Total Cover	

%Bare Ground in Herb

Stratum: 70

% Cover of Biotic

Crust:

**Dominance Test worksheet:**

Number of Dominant Species

That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant

Species Across All Strata: 3 (B)

Percent of Dominant Species

That Are OBL, FACW, or FAC: 0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of: Multiply by:

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 0 x 4 = 0

UPL species 80 x 5 = 400

Column Totals: 80 (A) 400 (B)

Prevalence Index = B/A = 5

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is &gt;50%

3 - Prevalence Index is ≤3.0<sup>1</sup>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)5 - Wetland Non-Vascular Plants<sup>1</sup>6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.**Hydrophytic  
Vegetation  
Present?**Yes ☐ No ☒**Remarks:** Area was dominated by upland vegetation and does not meet indicator for hydrophytic vegetation.

<b>SOIL</b>							Sampling Point: SP 012-9	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR 5/4	100					Loamy Sand	No redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
						<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<b>Restrictive Layer (if present):</b> Type: Roadfill rock Depth (inches): 2						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Restrictive layer encountered at 2 inches (Compacted gravel road fill). No redox observed above restrictive layer.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)						Secondary Indicators (2 or more required)		
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): NA Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): NA Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): NA (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Wetland hydrology indicators were not observed.								

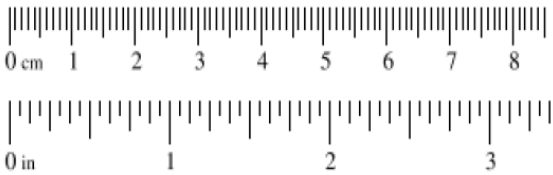
# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

Sampling Point SP- D04-10		Feature ID: D02-10		Date: 9/2/2019	
Project: Zayo Fiberoptic Interconnect Project					
Location Lassen County, CA		Photo begin/end file#: See Field Photos			
Investigator(s): P. Ferral, K. Daniels					
<input checked="" type="checkbox"/> Y / <input type="checkbox"/> N Do normal circumstances exist on the site?		Location Details:			
<input type="checkbox"/> Y / <input checked="" type="checkbox"/> N Is the site significantly disturbed?		Adjacent to U.S. 395.			
		Projection: Lambert Datum: NAD83			
		Coordinates: 40.12255, -120.24277			
<b>Potential anthropogenic influences on the channel system</b> Highway, fence line, and one culvert present.					
<b>Brief site description:</b> Small roadside ephemeral stream, no flow, willow lined banks. OHW M same as top of bank. One culvert present.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
Dates ESRI GIS imagery		Gage number:			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events			
<input type="checkbox"/> Existing delineation(s) for site and the most recent event exceeding a 5-year					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studie					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>  </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

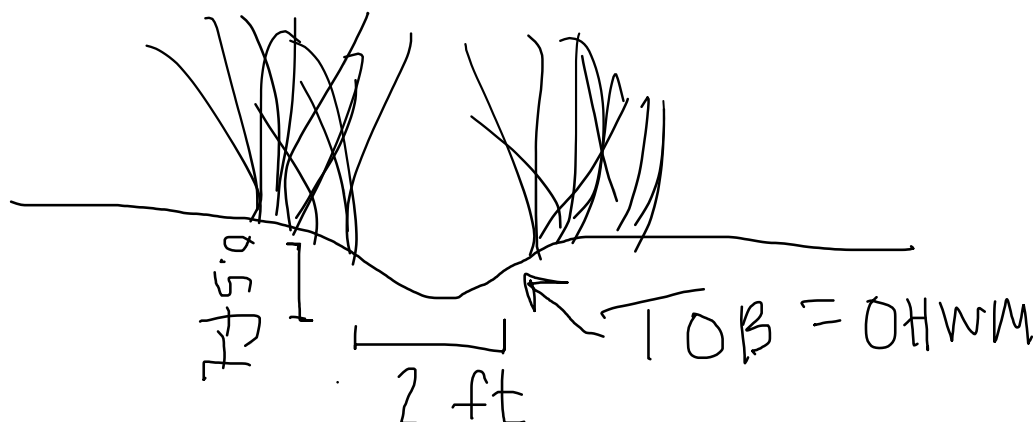


Feature ID: D02-10

Cross section ID:

Date:

Time:

Cross section drawingOHWM

GPS point: \_\_\_\_\_

Indicators

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species                  | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

Comments:

Narrow ephemeral stream, no flow, willow lined banks. OHWM same as top of bank. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover.

Floodplain unit:
☐ Low-Flow Channel    ☐ Active Floodplain    ☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit

Average sediment texture \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub \_\_\_\_\_ % Herb \_\_\_\_\_ %

Community successional stage

- |  |  |
|--|--|
| <input type="checkbox"/> NA                            | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input type="checkbox"/> Early (herbaceous & seedling) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

Indicators

- |  |   |
|--|---|
| <input type="checkbox"/> Mudcracks               | <input type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples                 | <input type="checkbox"/> Surface relief   |
| <input type="checkbox"/> Drift and/or debris     | <input type="checkbox"/> Other: _____     |
| <input type="checkbox"/> Presence of bed and ban | <input type="checkbox"/> Other: _____     |
| <input type="checkbox"/> Benches                 | <input type="checkbox"/> Other: _____     |

Comments

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

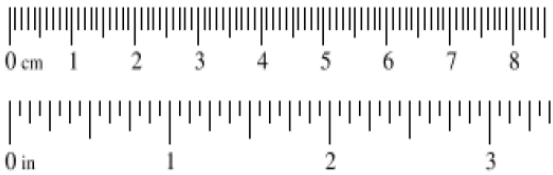
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Sampling Point <u>SP05-10</u>		Feature ID: <u>D03-10</u>		Date: <u>9/2/2019</u>	
Project: <u>Zayo Fiberoptic Interconnect Project</u>					
Location <u>Lassen County, CA</u>		Photo begin/end file#: <u>See Field Photos</u>			
Investigator(s): <u>P. Ferral, K. Daniels</u>					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site?		Location Details:  Projection: <u>Lambert</u> Datum: <u>NAD83</u> Coordinates: <u>40.140839, -120.27820</u>			
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?					
<b>Potential anthropogenic influences on the channel system</b> Highway, fence line, and 3 culverts present.					
<b>Brief site description:</b> Small roadside ephemeral stream, no flow. OHWM same as top of bank. Multiple culverts present along drainage.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates</b> <u>ESRI GIS imagery</u>		<b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps		Period of record: _____			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events			
<input type="checkbox"/> Existing delineation(s) for site and the most recent event exceeding a 5-year		<input type="checkbox"/> Other studies			
<input checked="" type="checkbox"/> Global positioning system (GPS)		<input type="checkbox"/> Other studies			
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b> </div>					

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

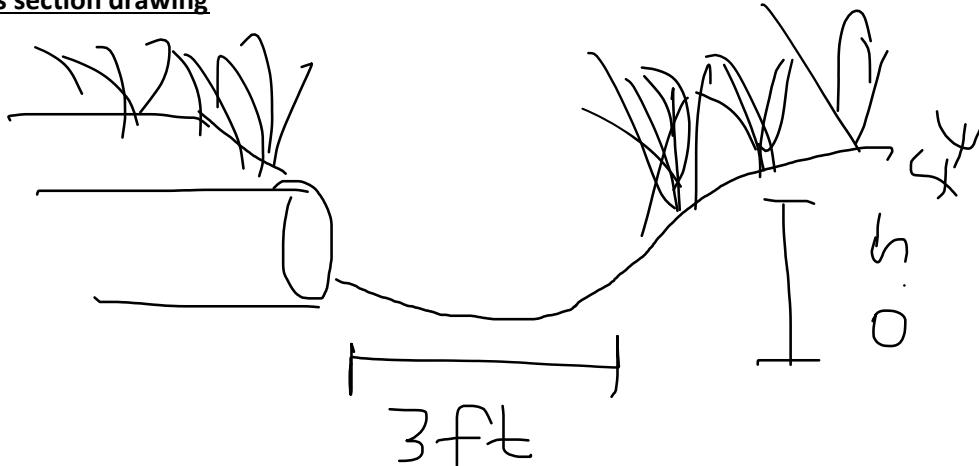


Feature ID: D03-10

Cross section ID:

Date:

Time:

**Cross section drawing****OHW**

GPS point: \_\_\_\_\_

**Indicators**

- ☒ Change in average sediment texture  
☐ Change in vegetation species  
☒ Change in vegetation cover

- ☒ Break in bank slope  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

**Comments:**

Small roadside ephemeral stream. Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

**Floodplain unit:**

☒ Low-Flow Channel    ☐ Active Floodplain    ☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit**Average sediment texture Clay

Total veg cover: 0 % Tree: 0 % Shrub 0 % Herb 0 %

Community successional stage

- ☒ NA    ☐ Mid (herbaceous, shrubs, saplings)  
☐ Early (herbaceous & seedling)    ☐ Late (herbaceous, shrubs, mature trees)

**Indicators**

- ☒ Mudcracks  
☐ Ripples  
☐ Drift and/or debris  
☒ Presence of bed and bank  
☐ Benches

- ☐ Soil development  
☐ Surface relief  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

**Comments**

Small roadside ephemeral stream. OHWM same as top of bank. Multiple culverts present along drainage.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain uni</b>			
Average sediment texture _____			
Total veg cover: _____ % Tree: _____ % Shrub _____ % Herb _____ %			
Community successional stag			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedling	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and ban	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments</b>			

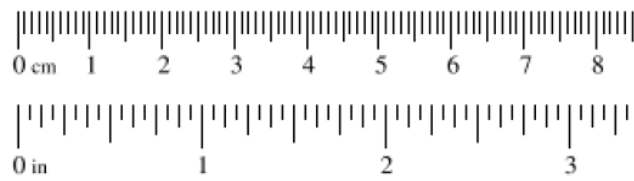
# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 08-10		<b>Feature ID:</b> D04-10		<b>Date:</b> 9/3/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> S. Fritz, P. Ferral					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Along Highway 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.15415, -120.30976		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
<b>Potential anthropogenic influences on the channel system:</b> Roadway, agriculture.					
<b>Brief site description:</b> Ephemeral stream flowing east toward Honey Lake, top of bank higher than OHWM, one associated culvert under Hwy 395 (C9-10).					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>  </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.           <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:           <div style="display: flex; justify-content: space-around;"> <input type="checkbox"/> Mapping on aerial photograph           <input checked="" type="checkbox"/> GPS           <input type="checkbox"/> Digitized on computer           <input type="checkbox"/> Other:         </div> </li> </ol>					



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

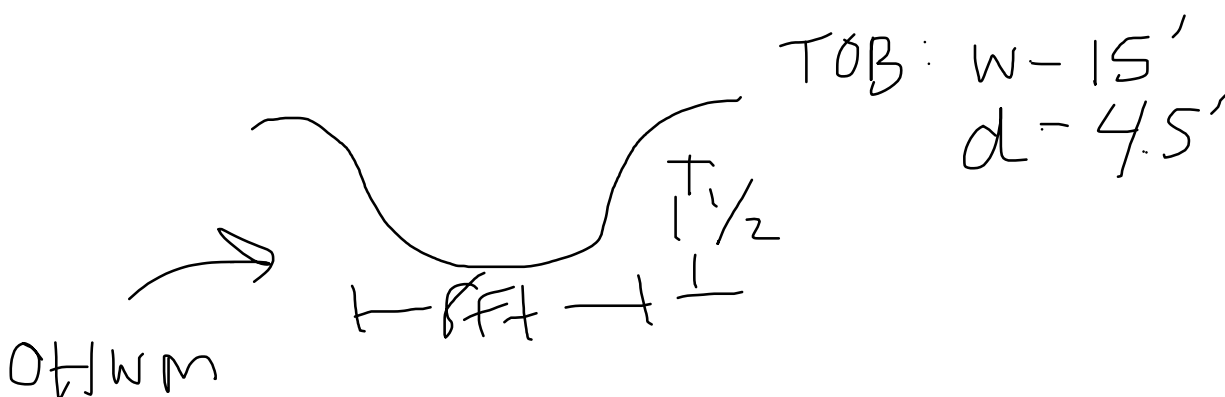


Feature ID: D04-10

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

## Indicators:

☒

Change in average sediment texture

☐

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

## Comments:

Three OHWM indicators observed: change in average sediment texture, change in vegetation cover and break in bank slope. Sampling point documents an ephemeral stream.

Floodplain unit:☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

## Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☒

NA

☐

Early (herbaceous &amp; seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

## Indicators:

☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☒

Presence of bed and bank

☐

Benches

☐

Soil development

☒

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

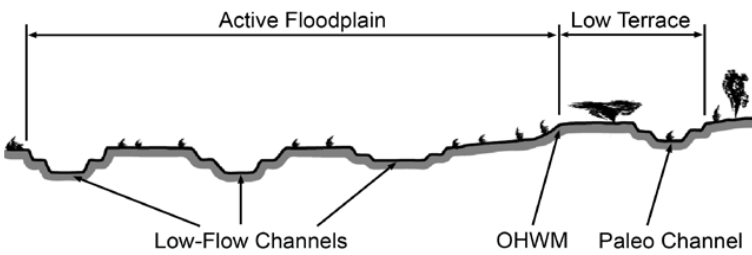
Other: \_\_\_\_\_

## Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

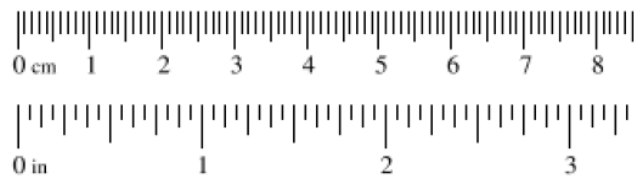
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
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<b>Characteristics of the floodplain unit:</b>			
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<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 11-10		<b>Feature ID:</b> D05-10		<b>Date:</b> 9/3/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> S. Fritz, P. Ferral					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Along Highway 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.16520, -120.34886			
<b>Potential anthropogenic influences on the channel system:</b> Roadway, rangeland (cows present).					
<b>Brief site description:</b> Perennial stream flowing east toward Honey Lake, wider at culvert and more channelized to the east, top of bank same as OHWM.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS Imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay



Feature ID: D05-10

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

**Comments:**

Four OHWM indicators: change in vegetation cover, change in sediment texture, change in vegetation species, and break in bank slope. Sampling point documents a perennial stream.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



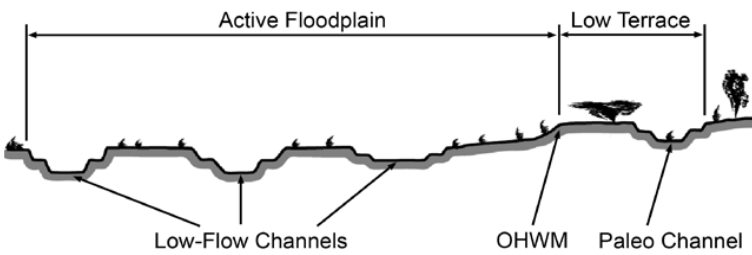
Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
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<b>Indicators:</b>			
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<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

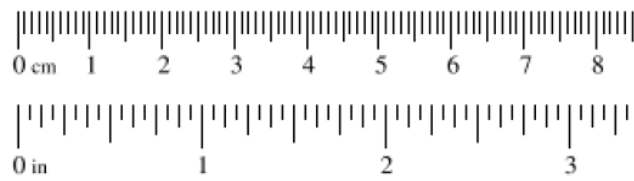
# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 12-10		<b>Feature ID:</b> D06-10		<b>Date:</b> 9/3/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> S. Fritz, P. Ferral					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Along Highway 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.16642, -120.35293			
<b>Potential anthropogenic influences on the channel system:</b> Roadway, rangeland (cows).					
<b>Brief site description:</b> Perennial stream trampled by cows, mucky bottom, standing water (not flowing), culvert under hwy (C12-10), FACW species present within channel, top of bank same as OHWM.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div style="text-align: center;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

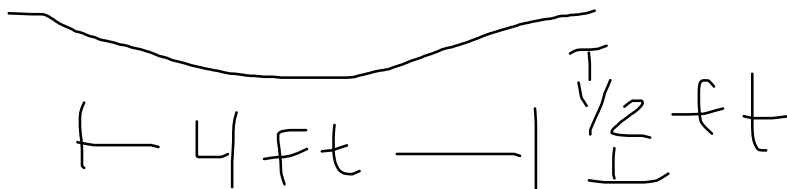


Feature ID: D06-10

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

## Indicators:

☐

Change in average sediment texture

☒

Break in bank slope

☒

Change in vegetation species

☐

Other: \_\_\_\_\_

☒

Change in vegetation cover

☐

Other: \_\_\_\_\_

## Comments:

Three OHWM indicators observed: change in vegetation cover, change in vegetation species, and break in bank slope. Sampling point documents a perennial stream.

Floodplain unit:☒

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

## Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☒

NA

☐

Mid (herbaceous, shrubs, saplings)

☐

Early (herbaceous &amp; seedlings)

☐

Late (herbaceous, shrubs, mature trees)

## Indicators:

☐

Mudcracks

☐

Soil development

☐

Ripples

☒

Surface relief

☐

Drift and/or debris

☐

Other: \_\_\_\_\_

☒

Presence of bed and bank

☐

Other: \_\_\_\_\_

☐

Benches

☐

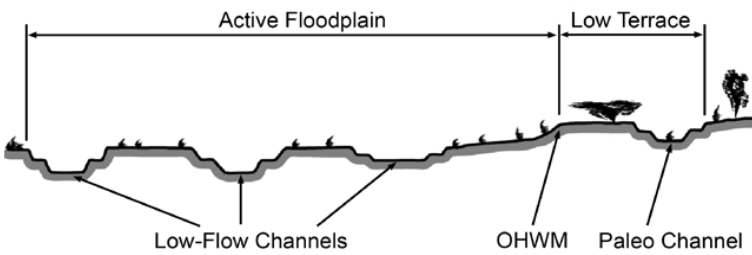
Other: \_\_\_\_\_

## Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

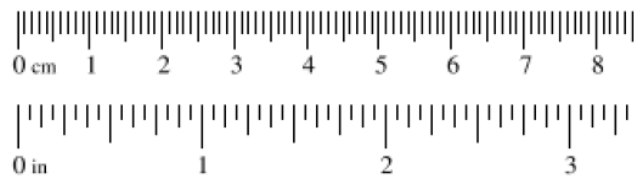
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
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<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
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<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 13-10		<b>Feature ID:</b> D07-10		<b>Date:</b> 9/3/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> S. Fritz, P. Ferral					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Lassen County <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.16894, -120.36430		
<b>Potential anthropogenic influences on the channel system:</b> Roadway, rangeland.					
<b>Brief site description:</b> Intermittent stream, flowing east into Honey Lake from C13-10, wider near culvert, becomes more channelized to the east, gravel and boulders throughout.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
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2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
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1/128 0.00015	0.0039	Very fine silt
		Clay

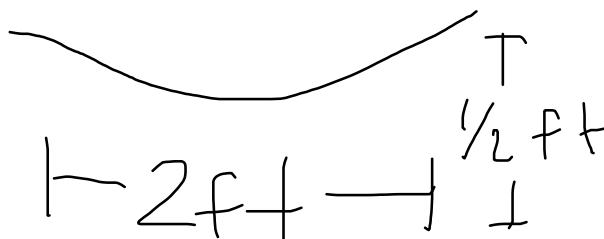


Feature ID: D07-10

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

**Indicators:**☒

Change in average sediment texture

☐

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

Three OHWM indicators observed: change in vegetation cover, change in sediment texture and break in bank slope. Sampling point documents an intermittent stream.

Floodplain unit:☒

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☒

NA

☐

Early (herbaceous &amp; seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**☐

Mudcracks

☐

Ripples

☒

Drift and/or debris

☐

Presence of bed and bank

☐

Benches

☐

Soil development

☒

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

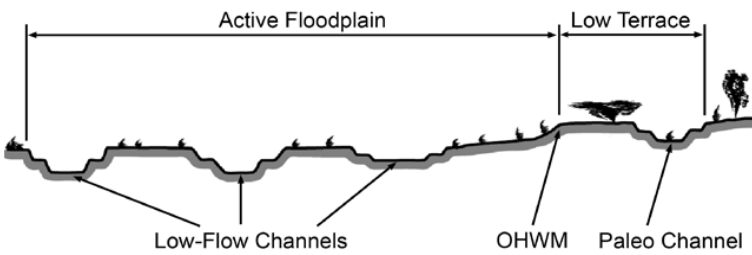
Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
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<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
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<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
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<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

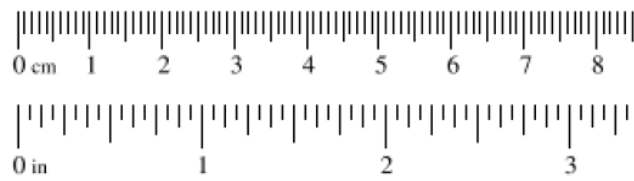
# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 14-10		<b>Feature ID:</b> D08-10		<b>Date:</b> 9/3/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> S. Fritz, P. Ferral					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Lassen County along U.S. Route 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b>			
<b>Potential anthropogenic influences on the channel system:</b> Roadway, agriculture, dam, irrigation pump.					
<b>Brief site description:</b> Perennial stream flowing east, stream is dammed outside ROW, water flowing over dam into more channelized stream with heavily vegetated banks, irrigation pipe and pump present (outside					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </li> </ol>					



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay



Feature ID: D08-10

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

**Indicators:**☒

Change in average sediment texture

☐

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

Three OHWM indicators observed: change in vegetation cover, change in sediment texture and break in bank slope. Sampling point documents a perennial stream.

Floodplain unit:☒

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: silt, sand and pebblesTotal veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: 5 %

Community successional stage:

☐

NA

☒

Early (herbaceous &amp; seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☒

Presence of bed and bank

☐

Benches

☐

Soil development

☒

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

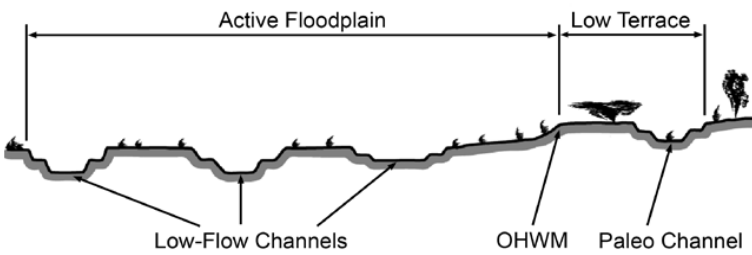
Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b><u>Floodplain unit:</u></b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

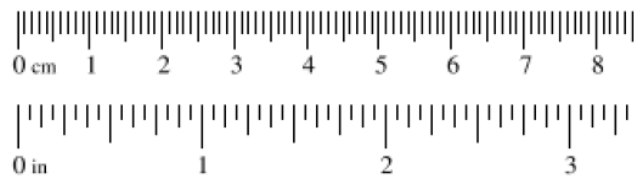
<b><u>Floodplain unit:</u></b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 101-10		<b>Feature ID:</b> D100-10		<b>Date:</b> 9/3/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M.Oats, K. Daniels					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to HWY 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.01497, -120.10202			
<b>Potential anthropogenic influences on the channel system:</b> Runs perpendicular (through culvert) to Highway 395; fence line present. Extends beyond ROW.					
<b>Brief site description:</b> Intermittent stream (currently dry at time of survey) runs under Highway 395 through large culvert.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies: </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>  Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other: </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

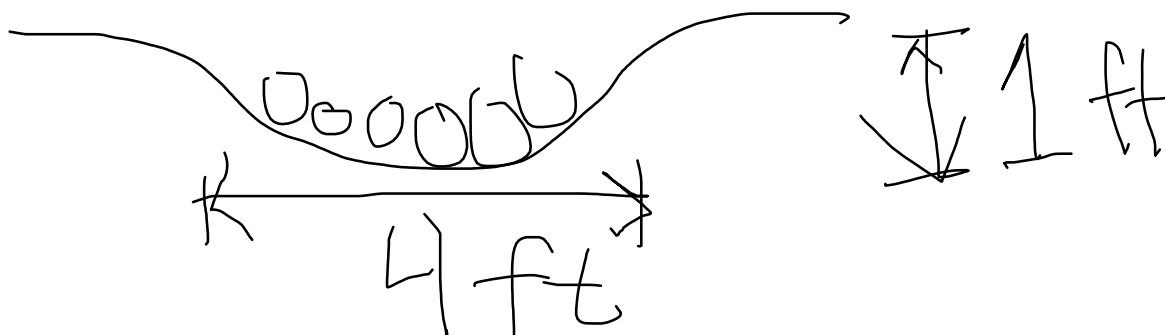


Feature ID: D100-10

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

Moderate break in bank slope, cobbles and boulders present below OHWM. *Salix exigua* is present below OHWM likely helps with bank stabilization. No wetland indicators present. Sampling point documents an intermittent stream.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Cobbles, boulders, sandTotal veg cover: 30 % Tree: 0 % Shrub: 30 % Herb: 0 %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

Intermittent stream that is currently dry at time of survey. Has some sorting (cobbles and boulders) within low-flow channel. *Salix exigua* present in low-flow channel.

Feature ID:

Cross section ID:

Date:

Time:

**Floodplain unit:**

☐

Low-Flow Channel

☒

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: 50 % Tree: \_\_\_\_\_ % Shrub: 50 % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Early (herbaceous & seedlings)

☒

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☐

Presence of bed and bank

☒

Benches

☐

Soil development

☐

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

Small active floodplain present where *Salix exigua* is more dense in the transition phase, before complete upland area that is dominated by *Purshia tridentata*. This floodplain is above OHWM and mapped within TOB. Likely floods during large storm events.

**Floodplain unit:**

☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Early (herbaceous & seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☐

Presence of bed and bank

☐

Benches

☐

Soil development

☐

Surface relief

☐

Other: \_\_\_\_\_

☐

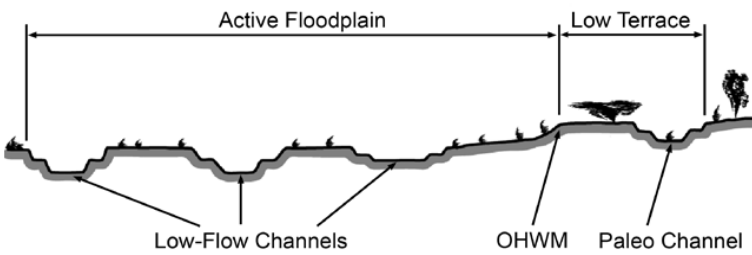
Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

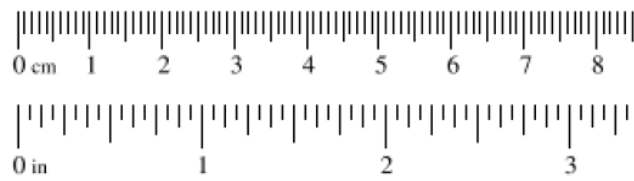
# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 102-10		<b>Feature ID:</b> D101-10		<b>Date:</b> 9/3/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M.Oats, K. Daniels					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.03434, -120.10984			
<b>Potential anthropogenic influences on the channel system:</b> Flows under HWY 395 (under bridge). Dam present (likely beaver) 20 feet to the northeast of the bridge, causing the river to be impounded.					
<b>Brief site description:</b> Perennial stream (Willow Ranch Creek) crosses under highway.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

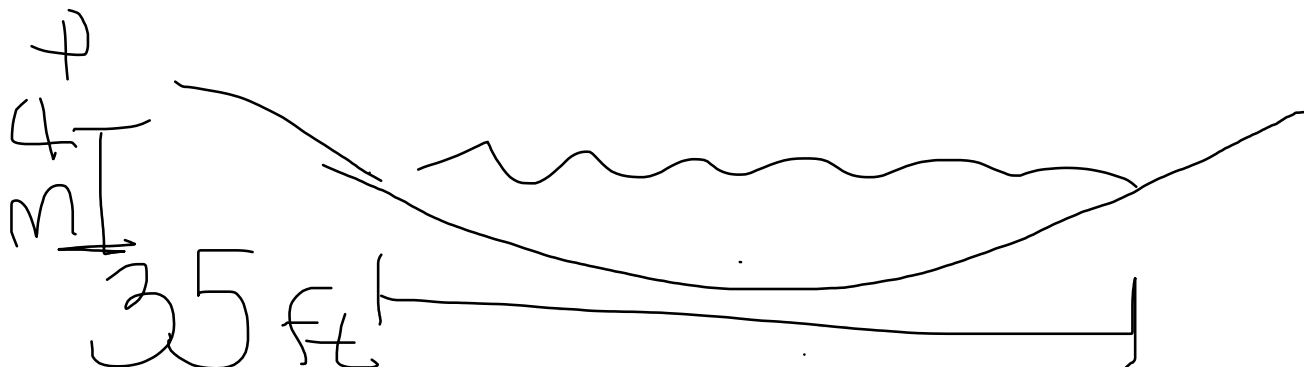


Feature ID: D101-10

Cross section ID:

Date:

Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents a perennial stream.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: Silty, muddy water present in stream.

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



Other: \_\_\_\_\_

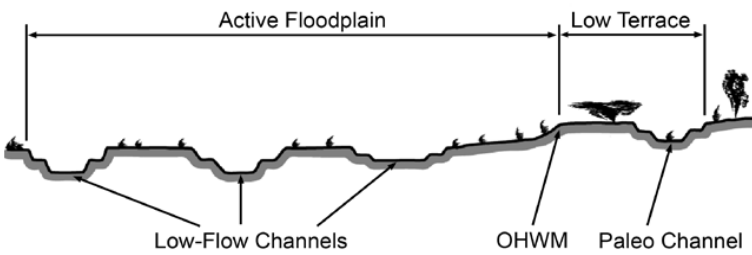
**Comments:**

Perennial stream with water present; beaver dam present so no flow through, but water is impounded.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel <input checked="" type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace		
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: <u>80</u> % Tree: <u>0</u> % Shrub: <u>75</u> % Herb: <u>5</u> %			
Community successional stage:			
<input type="checkbox"/> NA <input type="checkbox"/> Early (herbaceous & seedlings)		<input checked="" type="checkbox"/> Mid (herbaceous, shrubs, saplings) <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks <input type="checkbox"/> Ripples <input type="checkbox"/> Drift and/or debris <input type="checkbox"/> Presence of bed and bank <input checked="" type="checkbox"/> Benches		<input type="checkbox"/> Soil development <input checked="" type="checkbox"/> Surface relief <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	
<b>Comments:</b>			
Salix exigua is predominant species in active floodplain (riparian wetland).			

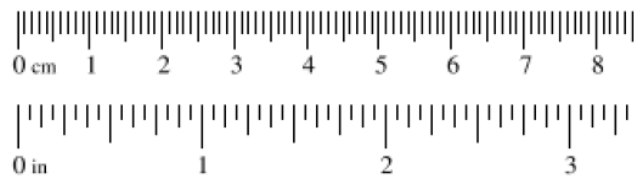
<b>Floodplain unit:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace		
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA <input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Mid (herbaceous, shrubs, saplings) <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks <input type="checkbox"/> Ripples <input type="checkbox"/> Drift and/or debris <input type="checkbox"/> Presence of bed and bank <input type="checkbox"/> Benches		<input type="checkbox"/> Soil development <input type="checkbox"/> Surface relief <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 105-10		<b>Feature ID:</b> D102-10		<b>Date:</b> 9/3/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M.Oats, K. Daniels					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.05194, -120.12647			
<b>Potential anthropogenic influences on the channel system:</b> Flows under HWY 395 (under bridge). Appears to have indicators of perennial stream, but dry at time of survey. Potentially used for irrigation and therefore all water has been siphoned from					
<b>Brief site description:</b> Perennial stream (Long Valley Creek) crosses highway through four culverts and small bridge.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay



Feature ID: D102-10

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

OHWM evidence by change in vegetation cover, sediment change present at OHWM, and gentle break in slope.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: SandTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



Other: \_\_\_\_\_

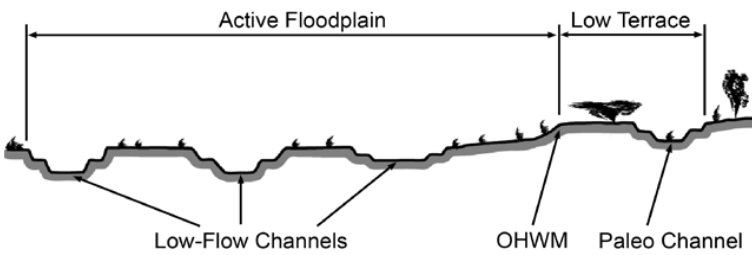
**Comments:**

No water present in low-flow channel. Sediment deposits are present on sandy bottom of low flow channel.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input checked="" type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: <u>80</u> % Tree: <u>0</u> % Shrub: <u>75</u> % Herb: <u>5</u> %			
Community successional stage:			
<input type="checkbox"/> NA	<input checked="" type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input checked="" type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			
Salix exigua is predominant species in active floodplain (riparian wetland).			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

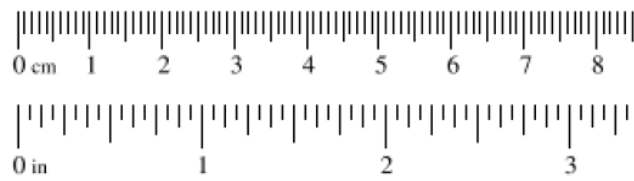
# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 106-10		<b>Feature ID:</b> D103-10		<b>Date:</b> 9/3/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M.Oats, K. Daniels					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to County Rd A3 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.07300, -120.14622			
<b>Potential anthropogenic influences on the channel system:</b> Runs parallel to Highway 395; somewhat incised from erosion.					
<b>Brief site description:</b> Ephemeral drainage (currently dry at time of survey) runs downslope to Long Valley Creek.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies: </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>  Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer </div> <div style="width: 45%;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other: </div> </div> </li> </ol>					



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

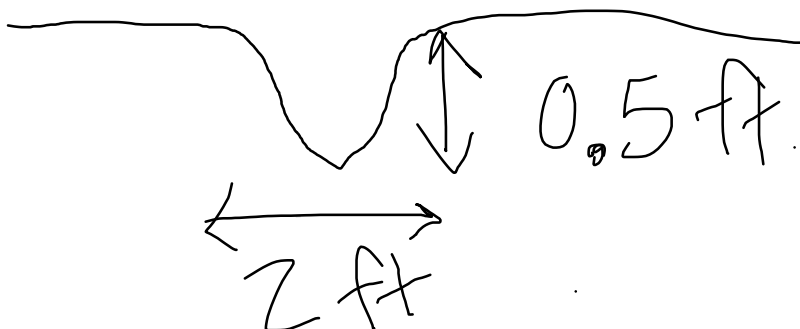


Feature ID: D103-10

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

**Indicators:**☐

Change in average sediment texture

☐

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

Bed and bank feature with scoured channel. OHWM evidenced by change in vegetation cover and break in bank slope. Sampling point documents an ephemeral stream.

Floodplain unit:☒

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Cobbles, sandTotal veg cover: 30 % Tree: 0 % Shrub: 0 % Herb: 30 %

Community successional stage:

☐

NA

☒

Early (herbaceous &amp; seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☒

Presence of bed and bank

☐

Benches

☐

Soil development

☐

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

Ephemeral drainage that is currently dry at time of survey. Has some sorting (cobbles) within low-flow channel. Noticeably incised due to erosion and flows.

Feature ID:

Cross section ID:

Date:

Time:

Floodplain unit:

☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Mid (herbaceous, shrubs, saplings)

☐

Early (herbaceous & seedlings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐

Mudcracks

☐

Soil development

☐

Ripples

☐

Surface relief

☐

Drift and/or debris

☐

Other: \_\_\_\_\_

☐

Presence of bed and bank

☐

Other: \_\_\_\_\_

☐

Benches

☐

Other: \_\_\_\_\_

**Comments:**

Floodplain unit:

☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Mid (herbaceous, shrubs, saplings)

☐

Early (herbaceous & seedlings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐

Mudcracks

☐

Soil development

☐

Ripples

☐

Surface relief

☐

Drift and/or debris

☐

Other: \_\_\_\_\_

☐

Presence of bed and bank

☐

Other: \_\_\_\_\_

☐

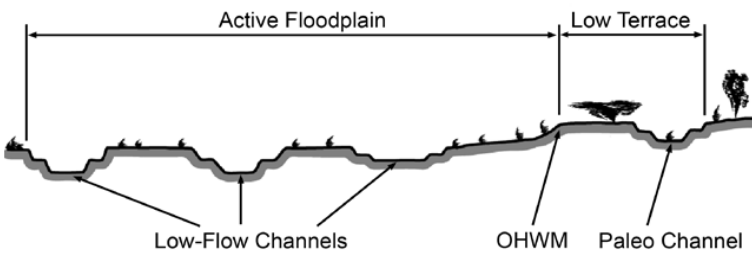
Benches

☐

Other: \_\_\_\_\_

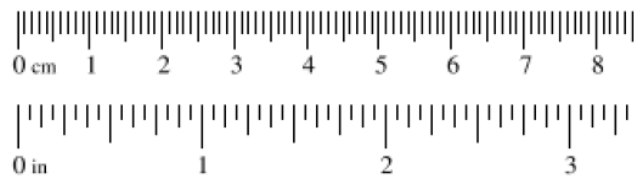
**Comments:**

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 107-10		<b>Feature ID:</b> D104-10		<b>Date:</b> 9/3/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M.Oats, K. Daniels					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.07321, -120.14654		
<b>Potential anthropogenic influences on the channel system:</b> Flows under HWY 395 (under bridge). Perennial stream with water present (but not enough for flow, at time of survey).					
<b>Brief site description:</b> Perennial stream (Long Valley Creek) crosses under highway.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input type="checkbox"/> Mapping on aerial photograph             <input checked="" type="checkbox"/> GPS             <input type="checkbox"/> Digitized on computer             <input type="checkbox"/> Other:             </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay



Feature ID: D104-10

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

## Indicators:

☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_

## Comments:

OHWM evidenced by change in vegetation cover, sediment change present at OHWM, and gentle break in slope present. Sampling point documents a perennial stream.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

## Characteristics of the floodplain unit:

Average sediment texture: SandTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

☒ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)

## Indicators:

☐ Mudcracks☒ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_

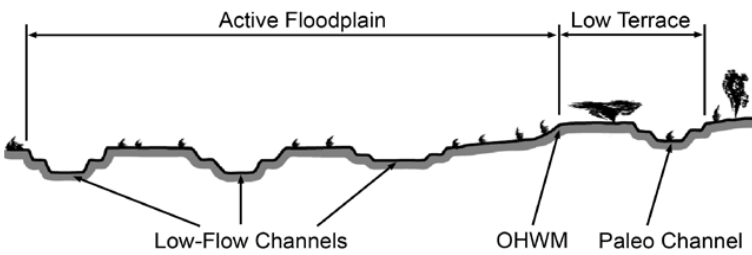
## Comments:

Standing water present in low-flow channel. Sediment deposits are present on areas without water of low-flow channel.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input checked="" type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sand</u>			
Total veg cover: <u>30</u> % Tree: <u>0</u> % Shrub: <u>0</u> % Herb: <u>30</u> %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input checked="" type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input checked="" type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			
Active floodplain is terraced slightly above the low flow channel, with sandy bottom and herabceaous vegetation present.			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input checked="" type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: <u>70</u> % Tree: _____ % Shrub: <u>40</u> % Herb: <u>30</u> %			
Community successional stage:			
<input type="checkbox"/> NA	<input checked="" type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input checked="" type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			
Salix exigua is predeominant species in low terrace (riparian wetland).			

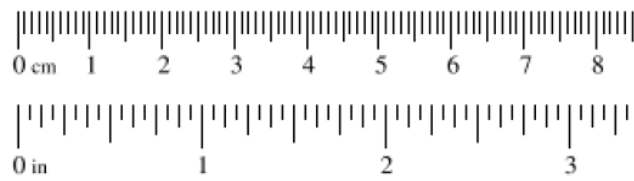
# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 110-10		<b>Feature ID:</b> D106-10		<b>Date:</b> 9/3/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M.Oats, K. Daniels					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to County Rd A3 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.96770, -120.04923			
<b>Potential anthropogenic influences on the channel system:</b> Runs perpendicular to Highway 395; appears to be irrigation canal.					
<b>Brief site description:</b> Perennial stream likely used for irrigation.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies: </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>  Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <input type="checkbox"/> Mapping on aerial photograph    <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Digitized on computer    <input type="checkbox"/> Other: </div> </li> </ol>					



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

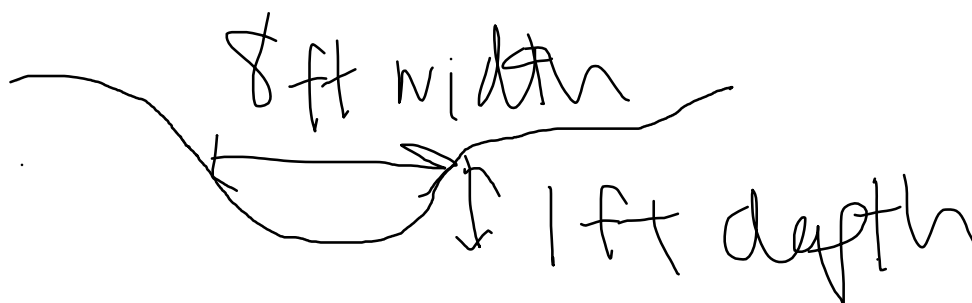


Feature ID: D106-10

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

## Indicators:

☐

Change in average sediment texture

☐

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

## Comments:

Bed and bank feature. OHWM evidenced by moderate break in bank slope and change in vegetation cover. Sampling point documents a perennial stream.

Floodplain unit:☒

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

## Characteristics of the floodplain unit:

Average sediment texture: SandTotal veg cover: 5 % Tree: 0 % Shrub: 0 % Herb: 5 %

Community successional stage:

☐

NA

☒

Early (herbaceous &amp; seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

## Indicators:

☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☒

Presence of bed and bank

☐

Benches

☐

Soil development

☐

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

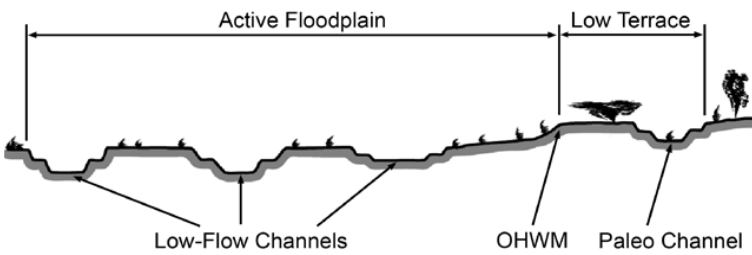
## Comments:

Water present with algal present in the low-flow channel.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b><u>Floodplain unit:</u></b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

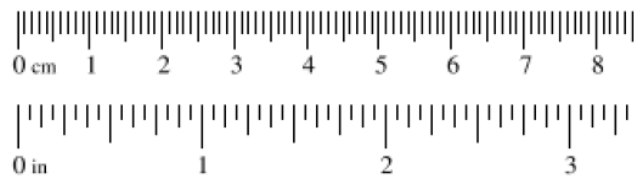
<b><u>Floodplain unit:</u></b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 111-10		<b>Feature ID:</b> D107-10		<b>Date:</b> 9/3/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M.Oats, K. Daniels					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.99476, -120.07863			
<b>Potential anthropogenic influences on the channel system:</b> Flows under HWY 395 (under bridge). Appears to have indicators of perennial stream, but dry at time of survey. Potentially used for irrigation and therefore all water has been siphoned from					
<b>Brief site description:</b> Perennial stream (Long Valley Creek) crosses highway under bridge.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies: </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>  Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <input type="checkbox"/> Mapping on aerial photograph    <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Digitized on computer    <input type="checkbox"/> Other: </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

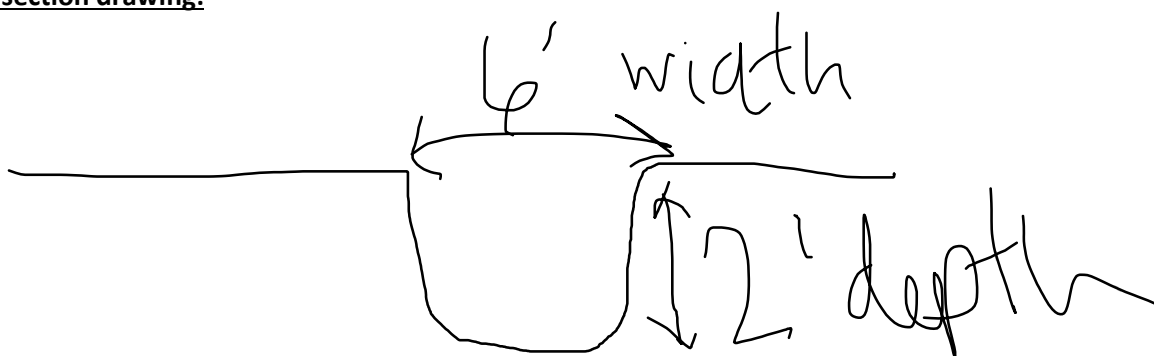


Feature ID: D107-10

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

## Indicators:

☐

Change in average sediment texture

☐

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

## Comments:

Defined bed and bank feature with scoured channel. OHWM evidenced by change in vegetation cover at OHWM and sharp break in slope. Some portions of channel incised. Sampling point documents a perennial stream.

Floodplain unit:☒

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

## Characteristics of the floodplain unit:

Average sediment texture: SiltTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 2 %

Community successional stage:

☐

NA

☒

Early (herbaceous &amp; seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

## Indicators:

☐

Mudcracks

☒

Ripples

☐

Drift and/or debris

☒

Presence of bed and bank

☐

Benches

☐

Soil development

☐

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

## Comments:

No water present in low-flow channel. Sediment deposits are present on sandy bottom of low flow channel.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input checked="" type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Silty clay</u>			
Total veg cover: <u>95</u> % Tree: <u>0</u> % Shrub: <u>2</u> % Herb: <u>93</u> %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input checked="" type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input checked="" type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			
Lepidium latifolium is predeominant species in active floodplain (riparian wetland).			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

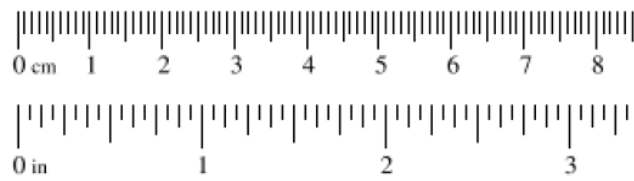
# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 202-10		<b>Feature ID:</b> D200-10		<b>Date:</b> 9/10/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M.Oats, T. Kayatsky, P. Ferral					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.01804, -120.10420			
<b>Potential anthropogenic influences on the channel system:</b> Drainage adjacent to HWY 395. Appears to be an ephemeral drainage that is dry at time of survey.					
<b>Brief site description:</b> Ephemeral drainage, manipulated for storm drainage. OHWM and TOB are the same.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies: </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>  Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <div style="margin-left: 20px;"> a) Record the floodplain unit and GPS position.  b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.  c) Identify any indicators present at the location. </div> 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph <input type="checkbox"/> Digitized on computer		<input checked="" type="checkbox"/> GPS <input type="checkbox"/> Other:			



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

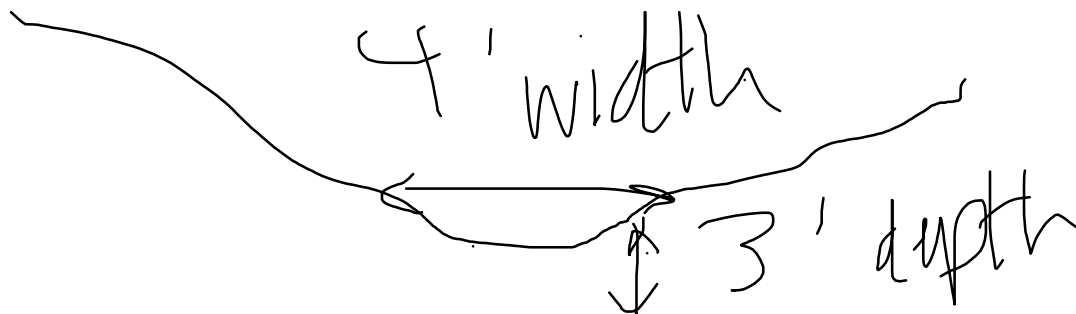


Feature ID: D200-10

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

## Indicators:

☒

Change in average sediment texture

☐

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

## Comments:

Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

Floodplain unit:☒

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

## Characteristics of the floodplain unit:

Average sediment texture: silt, sand, granule, cobbleTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

☒

NA

☐

Early (herbaceous &amp; seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

## Indicators:

☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☒

Presence of bed and bank

☐

Benches

☐

Soil development

☒

Surface relief

☒Other: Surface soil cracks☐

Other: \_\_\_\_\_

☐

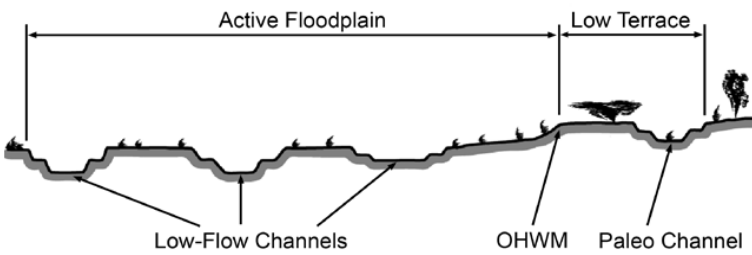
Other: \_\_\_\_\_

## Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

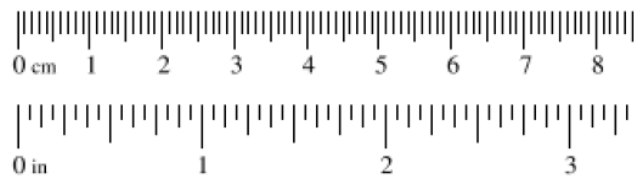
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 203-10		<b>Feature ID:</b> D201-10		<b>Date:</b> 9/10/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M.Oats, T. Kayatsky, P. Ferral					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.09367, -120.17775			
<b>Potential anthropogenic influences on the channel system:</b> Drainage adjacent to HWY 395. Appears to be an ephemeral drainage that is dry at time of survey.					
<b>Brief site description:</b> Ephemeral drainage, manipulated for storm drainage. Stream width 4' within ROW. OHWM and TOB are the same					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

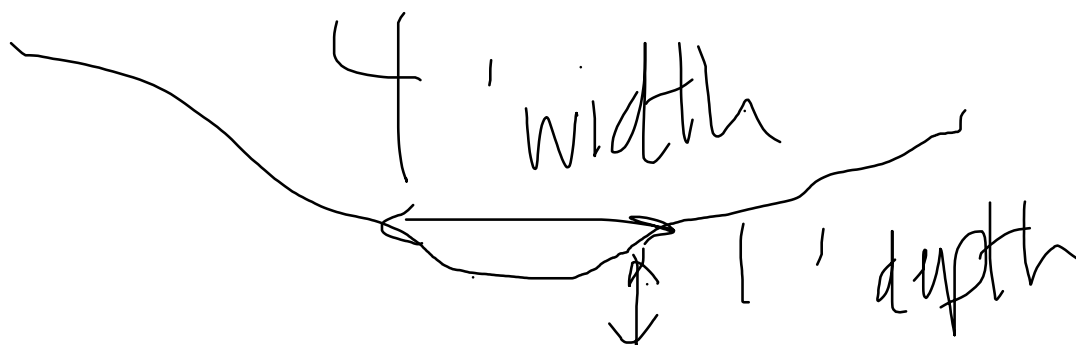


Feature ID: D201-10

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

## Indicators:



Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

## Comments:

Bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

## Characteristics of the floodplain unit:

Average sediment texture: silt, sand, coarse sand, cobble

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 5 %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

## Indicators:



Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: Surface soil cracks



Other: \_\_\_\_\_



Other: \_\_\_\_\_

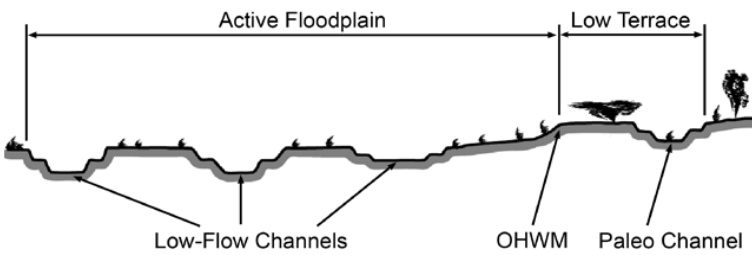
## Comments:

No water present in low-flow channel. Surface relief is present and the bed has surface soil cracks in the low-flow channel.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

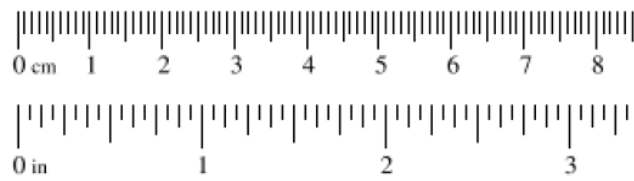
### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 204-10		<b>Feature ID:</b> D202-10		<b>Date:</b> 9/10/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M.Oats, T. Kayatsky, P. Ferral					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.16179, -120.33644			
<b>Potential anthropogenic influences on the channel system:</b> Roadway adjacent.					
<b>Brief site description:</b> Ephemeral drainage. OHWM and TOB are the same.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b>          Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

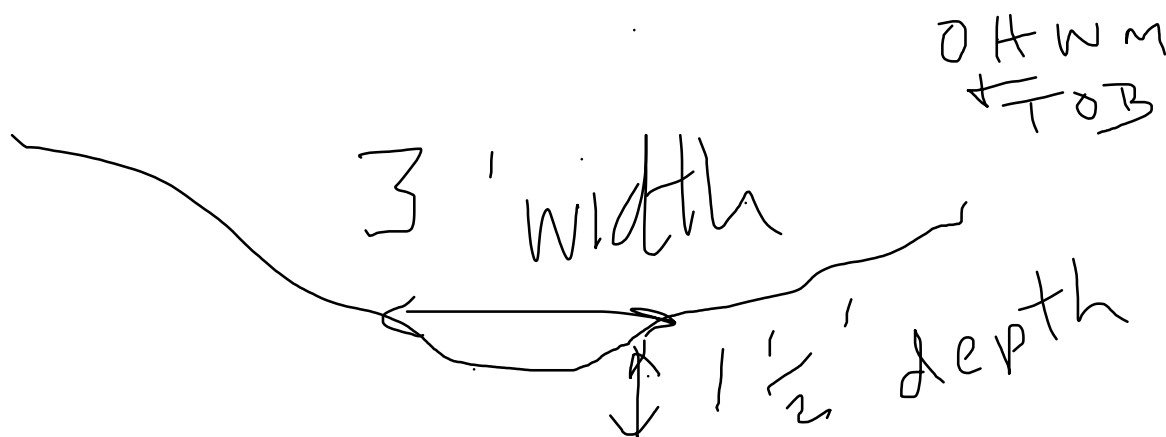


Feature ID: D202-10

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

## Indicators:



Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

## Comments:

Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an ephemeral stream.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

## Characteristics of the floodplain unit:

Average sediment texture: silt, sand, coarse sand, pebble, cobble

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

## Indicators:



Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: Surface soil cracks



Other: \_\_\_\_\_



Other: \_\_\_\_\_

## Comments:

No water present in low-flow channel. Surface relief is present and the bed has surface soil cracks in the low-flow channel.

Feature ID:

Cross section ID:

Date:

Time:

**Floodplain unit:**

☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Mid (herbaceous, shrubs, saplings)

☐

Early (herbaceous & seedlings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐

Mudcracks

☐

Soil development

☐

Ripples

☐

Surface relief

☐

Drift and/or debris

☐

Other: \_\_\_\_\_

☐

Presence of bed and bank

☐

Other: \_\_\_\_\_

☐

Benches

☐

Other: \_\_\_\_\_

**Comments:**

**Floodplain unit:**

☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Mid (herbaceous, shrubs, saplings)

☐

Early (herbaceous & seedlings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐

Mudcracks

☐

Soil development

☐

Ripples

☐

Surface relief

☐

Drift and/or debris

☐

Other: \_\_\_\_\_

☐

Presence of bed and bank

☐

Other: \_\_\_\_\_

☐

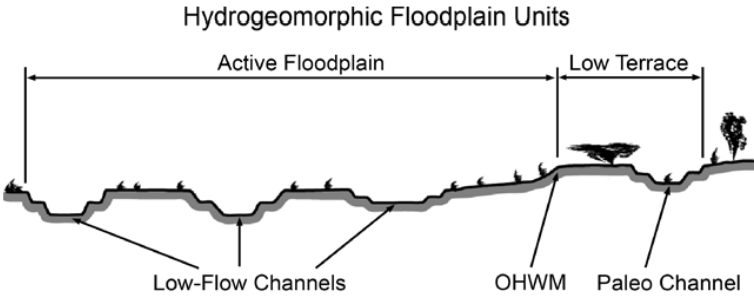
Benches

☐

Other: \_\_\_\_\_

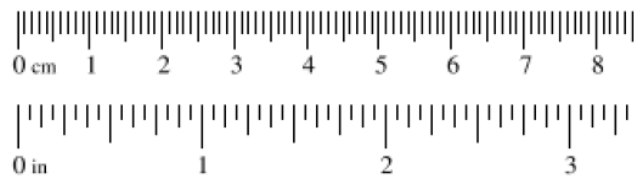
**Comments:**

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 205-10		<b>Feature ID:</b> D203-10		<b>Date:</b> 9/10/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, T. Kayatsky, P. Ferral					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.16266, -120.33973			
<b>Potential anthropogenic influences on the channel system:</b> Drainage adjacent to HWY 395.					
<b>Brief site description:</b> Intermittent drainage. OHWM and TOB are the same.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies: _____         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other: _____             </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
		Granule
0.079	2.00	
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

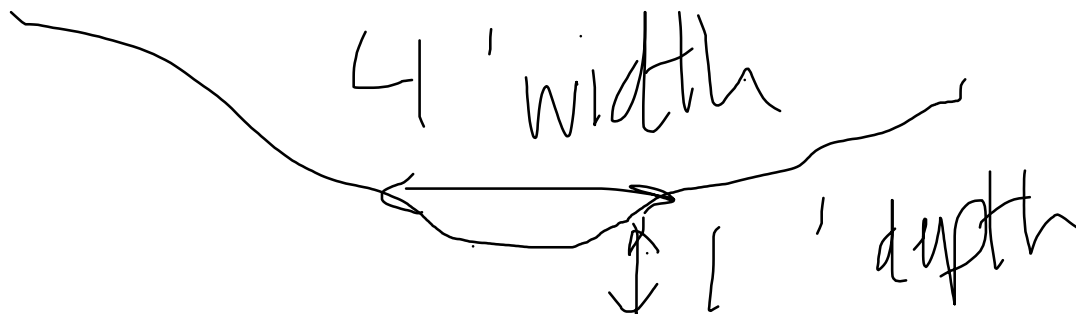


Feature ID: D203-10

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

## Indicators:

☒

Change in average sediment texture

☐

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

## Comments:

Defined bed and bank feature with scoured channel. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an intermittent stream.

Floodplain unit:☒

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

## Characteristics of the floodplain unit:

Average sediment texture: silt, sand, cobble pebble , boulder

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 5 %

Community successional stage:

☐

NA

☐

Mid (herbaceous, shrubs, saplings)

☒

Early (herbaceous &amp; seedlings)

☐

Late (herbaceous, shrubs, mature trees)

## Indicators:

☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☒

Presence of bed and bank

☐

Benches

☐

Soil development

☒

Surface relief

☒

Other: Surface soil cracks

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

## Comments:

No water present in low-flow channel. Surface relief is present and the bed has surface soil cracks in the low-flow channel.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Sampling Point: SP 9-10

Feature ID: W05-10

Project/Site: Zayo Fiberoptic Interconnect Project, Group #10

City/County: Lassen County

Sampling Date: 9/3/2019

Applicant/Owner: Zayo Group

State: California

Investigator(s): S. Fritz, P. Ferral

Section, Township, Range: S25, T27N, R14E

Local relief (hillside, terrace, etc.): Depression

Local Relief (concave, convex, none): Concave

Slope (%): 2

Subregion (LRR): D

Lat: 40.16562

Long: -120.35041

Datum: NAD83

Soil Map Unit Name: (328) Plinco loam, 2 to 9 percent slopes

NW1 classification:

None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)Are Vegetation ☐ N, Soil ☐ N, or Hydrology ☐ N significantly disturbed?Are "Normal Circumstances" present? Yes ☒ No ☐Are Vegetation ☐ N, Soil ☐ N, or Hydrology ☐ N naturally problematic?

(If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?

Yes ☒ No ☐

Hydric Soil Present?

Yes ☒ No ☐

Wetland Hydrology Present?

Yes ☒ No ☐Is the Sampled Area  
within a Wetland?Yes ☒ No ☐

**Remarks:** Relatively small wetland with one culvert associated (C10-10) evidenced by indicators of hydrophytic vegetation, and primary hydrology indicators (surface water, high water table and saturation). Hydrophytic vegetation and standing water is present; hydric soils are presumed.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0		= Total Cover

Sapling/Shrub Stratum (Plot size: 15' radius)				
1 SALEXI	Salix exigua	60	YES	FACW
2				
3				
4		12		
5				
		72		= Total Cover

Herb Stratum (Plot size: 5' radius)				
1 JUNBAL	Juncus balticus	30	YES	FACW
2 ELEPAL	Eleocharis palustris	30	YES	OBL
3				
4				
5				
6				
7				
8				
9				
10				
11				
		60		= Total Cover

Woody Vine Stratum (Plot size: _____)				
1				
2				
		0		= Total Cover

%Bare Ground in Herb

% Cover of Biotic

Stratum: 40

Crust: \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species

That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant

Species Across All Strata: 3 (B)

Percent of Dominant Species

That Are OBL, FACW, or FAC: 100% (A/B)

**Prevalence Index worksheet:**

Total % Cover of: Multiply by:

OBL species 30 x 1 = 30

FACW species 90 x 2 = 180

FAC species 0 x 3 = 0

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 120 (A) 210 (B)

Prevalence Index = B/A = 1.75

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is &gt;50%

Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)5 - Wetland Non-Vascular Plants<sup>1</sup>6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation

Present?

Yes ☒ No ☐

**Remarks:** A dominance of hydrophytic vegetation observed.



SOIL		Sampling Point: SP 9-10					
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.							
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>							
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>				
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )				
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )				
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Reduced Vertic (F18)				
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )	<input type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Red Parent Material (TF2)				
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )	<input type="checkbox"/> Redox Dark Surface (F6)		<input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)						
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)						
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)							
<b>Restrictive Layer (if present):</b>				<b>Hydric Soil Present?</b>			
Type: <input type="text" value="NA"/>				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Depth (inches): <input type="text" value="NA"/>							
<b>Remarks:</b> Soils assumed hydric, no pit dug as standing water present near culvert; veg passes rapid test for hydrophytic vegetation.							
<b>HYDROLOGY</b>							
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>			
Primary Indicators (minimum of one required; check all that apply)				Water Marks (B1) ( <b>Riverine</b> )			
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )				
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )				
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)				
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)						
<b>Field Observations:</b>				<b>Wetland Hydrology Present?</b>			
Surface Water Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches): <input type="text" value="0"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Water Table Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches): <input type="text" value="0"/>				
Saturation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches): <input type="text" value="0"/>				
(includes capillary fringe)							
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>							
<b>Remarks:</b> Three primary hydrology indicators observed: surface water, high water table, and saturation, one secondary indicator: dominant species passed FAC-neutral test.							

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Sampling Point: SP 10-10

Feature ID: U05-10

Project/Site: Zayo Fiberoptic Interconnect Project, Group #10

City/County: Lassen County

Sampling Date: 9/3/2019

Applicant/Owner: Zayo Group

State: California

Investigator(s): S. Fritz, P. Ferral

Section, Township, Range: S25, T27N, R14E

Local relief (hillside, terrace, etc.): Hillside

Local Relief (concave, convex, none): None

Slope (%): 5

Subregion (LRR): D Lat: 40.16561

Long: -120.35044

Datum: NAD83

Soil Map Unit Name: (328) Plinco loam, 2 to 9 percent slopes

NW1 classification:

None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)Are Vegetation ☐ N, Soil ☐ N, or Hydrology ☐ N significantly disturbed? ☐ Are "Normal Circumstances" present? Yes ☒ No ☐Are Vegetation ☐ N, Soil ☐ N, or Hydrology ☐ N naturally problematic? ☐ (If needed, explain any answers in Remarks.)**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**Hydrophytic Vegetation Present? Yes ☐ No ☒ xHydric Soil Present? Yes ☐ No ☒ xWetland Hydrology Present? Yes ☐ No ☒ xIs the Sampled Area  
within a Wetland?Yes ☐ No ☒ x**Remarks:** Sample confirmed as upland along slope where indicators of all three parameters are absent; upland pair point to W05-10.**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0		= Total Cover

Sapling/Shrub Stratum (Plot size: 15' radius)				
1 SALEXI	Salix exigua	40	YES	FACW
2				
3				
4				
5				
		40		= Total Cover

Herb Stratum (Plot size: 5' radius)				
1 THIINT	Thiniopyron intermedium	70	YES	UPL
2 ARTTRI	Artemesia tridentata	5	NO	UPL
3 ACNAME	Acmispon americanus	5	NO	UPL
4 BROTEC	Bromus techtorum	5	NO	UPL
5				
6				
7				
8				
9				
10				
11				
		85		= Total Cover

Woody Vine Stratum (Plot size: _____)				
1				
2				
		0		= Total Cover

%Bare Ground in Herb

% Cover of Biotic

Stratum: \_\_\_\_\_

Crust: \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species

That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant

Species Across All Strata: 2 (B)

Percent of Dominant Species

That Are OBL, FACW, or FAC: 50% (A/B)

**Prevalence Index worksheet:**

Total % Cover of: Multiply by:

OBL species 0 x 1 = 0

FACW species 40 x 2 = 80

FAC species 0 x 3 = 0

FACU species 0 x 4 = 0

UPL species 85 x 5 = 425

Column Totals: 125 (A) 505 (B)

Prevalence Index = B/A = 4.04

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is &gt;50%

3 - Prevalence Index is ≤3.0<sup>1</sup>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)5 - Wetland Non-Vascular Plants<sup>1</sup>6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.**Hydrophytic  
Vegetation**

Present?

Yes ☐ No ☒ X**Remarks:** No dominance of hydrophytic vegetation observed.

[illegible]

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #10 City/County: Lassen County Sampling Date: 9/3/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: SP 103-10 Feature ID: W100-10  
 Investigator(s): M. Oats, K. Daniels Section, Township, Range: S7, T25N, R17E  
 Local relief (hillside, terrace, etc.): Terrace Local Relief (concave, convex, none): Convex Slope (%): 5  
 Subregion (LRRN) D Lat: 40.03441 Long: -120.10991 Datum: NAD83  
 Soil Map Unit Name: (143) Calpine sandy loam, 0 to 2 percent slopes NWI classification: PSSC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☒ No ☐  
 Hydric Soil Present? Yes ☒ No ☐  
 Wetland Hydrology Present? Yes ☒ No ☐

Is the Sampled Area within a Wetland? Yes ☒ No ☐

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour: \_\_\_\_\_ OHWM Mapped: \_\_\_\_\_  
 Feature Designation: Perennial: \_\_\_\_\_ Intermittent: \_\_\_\_\_ Ephemeral: \_\_\_\_\_  
 Natural Drainage: \_\_\_\_\_ Artificial Drainage: \_\_\_\_\_ Navigable Water: \_\_\_\_\_

**Remarks:** Wetland parameters are present as indicated by hydrology indicator saturation, hydric soils (depleted below dark surface), and a prevalence index of <3.0 for hydrophytic vegetation.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1 _____				
2 _____				
3 _____				
4 _____				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)				
1 Salexi Salix exigua	70	YES	FACW	
2 Roswoo Rosa woodsii	10	NO	FACU	
3 _____				
4 _____				
5 _____				
		80	= Total Cover	

Herb Stratum (Plot size: 5' radius)				
1 Erican Erigeron canadensis	20	YES	FACU	
2 Cirarv Cirsium arvense	10	YES	FACU	
3 _____				
4 _____				
5 _____				
6 _____				
7 _____				
8 _____				
9 _____				
10 _____				
11 _____				
		30	= Total Cover	

Woody Vine Stratum (Plot size: _____)				
1 _____				
2 _____				
		0	= Total Cover	

% Bare Ground in Herb 70 % Cover of Biotic \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.3333 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 70	x 2 = 140
FAC species 0	x 3 = 0
FACU species 40	x 4 = 160
UPL species 0	x 5 = 0
Column Totals: 110 (A)	300 (B)
Prevalence Index = B/A = 2.7273	

**Hydrophytic Vegetation Indicators:**

- 1 - Rapid Test for Hydrophytic Vegetation  
 No 2 - Dominance Test is >50%  
 Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☒ No ☐

**Remarks:** Hydrophytic vegetation indicator is met by prevalence index (i.e. less than 3) in the shrub layer; whereas the herb layer contains FACU sp

SOIL							Sampling Point: SP 103-10	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR 2/1	80					Loamy clay sand	
	10 YR 2/2	20						
5-14	10 YR 2/2	58	7.5 YR 4/6	2	C	M	Loamy sand	Prominent redox concentrations
	10 YR 2/1	40						
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>					
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )					
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )					
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Reduced Vertic (F18)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )	<input type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Red Parent Material (TF2)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )	<input checked="" type="checkbox"/> Redox Dark Surface (F6)		<input type="checkbox"/> Other (Explain in Remarks)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)							
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>							<b>Hydric Soil Present?</b>	
Type: Road bed							Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Depth (inches): 14								
<b>Remarks:</b> Restrictive layer encountered at 14 inches. Indicator F6 (redox dark surface) met by at least 5% redox concentrations occurring as soft masses in a layer at least 4 inches thick starting in the upper 8 inches of soil surface.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>			
Primary Indicators (minimum of one required; check all that apply)					Water Marks (B1) ( <b>Riverine</b> )			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)				<input checked="" type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)				<input checked="" type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)				<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)				<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)				<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)				<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)				<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)				<input type="checkbox"/> FAC-Neutral Test (D5)			
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)							
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>			
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	NA	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	NA				
Saturation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	0				
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicator present as evidenced by saturation to the soil surface (no water table present but adjacent to creek and therefore, has groundwater saturation present from creek presence). Sediment and drift deposits are present as secondary indicators (riverine).								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #10 City/County: Lassen County Sampling Date: 9/2/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: 104-10 Feature ID: U100-10  
 Investigator(s): M.Oats, K. Daniels Section, Township, Range: S7, T25N, R17E  
 Local relief (hillside, terrace, etc.): Terrace Local Relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR): D Lat: 40.03442 Long: -120.10992 Datum: NAD83  
 Soil Map Unit Name: (143) Calpine sandy loam, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☐ No ☒  
 Hydric Soil Present? Yes ☐ No ☒  
 Wetland Hydrology Present? Yes ☐ No ☒

Is the Sampled Area within a Wetland? Yes ☐ No ☒

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour: \_\_\_\_\_ OHWM Mapped: \_\_\_\_\_  
 Feature Designation: Perennial: \_\_\_\_\_ Intermittent: \_\_\_\_\_ Ephemeral: \_\_\_\_\_  
 Natural Drainage: \_\_\_\_\_ Artificial Drainage: \_\_\_\_\_ Navigable Water: \_\_\_\_\_

Remarks: Sample confirmed as upland along slope where indicators of all three parameters are absent; upland pair point to W100-10.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0		= Total Cover

Sapling/Shrub Stratum (Plot size: 15' radius)				
1 Purtri	Purshia tridentata	30	YES	UPL
2 Arttri	Artemisia tridentata	20	YES	UPL
3 Salexi	Salix exigua	10	NO	FACW
4				
5				
		60		= Total Cover

Herb Stratum (Plot size: 5' radius)				
1 Agrcri	Agropyron cristatum	35	YES	UPL
2 Erican	Erigeron canadensis	15	NO	FACU
3 Vertha	Verbascum thapsus	10	NO	FACU
4 Sisalt	Sisymbrium altissimum	15	NO	FACU
5 Brotec	Bromus tectorum	10	NO	UPL
6				
7				
8				
9				
10				
11				
		85		= Total Cover

Woody Vine Stratum (Plot size: _____)				
1				
2				
		0		= Total Cover

% Bare Ground in Herb 15 % Cover of Biotic \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species 0	x 1 =	0
FACW species 10	x 2 =	20
FAC species 0	x 3 =	0
FACU species 40	x 4 =	160
UPL species 95	x 5 =	475
Column Totals: 145 (A)		655 (B)
Prevalence Index = B/A =		4.5172

**Hydrophytic Vegetation Indicators:**

- 1 - Rapid Test for Hydrophytic Vegetation
- No 2 - Dominance Test is >50%
- No 3 - Prevalence Index is ≤3.0<sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants<sup>1</sup>
- 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☐ No ☒

Remarks: Sample point dominated by UPL vegetation.

[illegible]

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #10 City/County: Lassen County Sampling Date: 9/3/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: SP 108-10 Feature ID: W103-10  
 Investigator(s): M. Oats, K. Daniels Section, Township, Range: S2, T24N, R17E  
 Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRRN) D Lat: 39.95929 Long: -120.04021 Datum: NAD83  
 Soil Map Unit Name: (210) Fortsage silt loam, 0 to 2 percent slopes, hydric NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☒ No ☐  
 Hydric Soil Present? Yes ☒ No ☐  
 Wetland Hydrology Present? Yes ☒ No ☐

Is the Sampled Area within a Wetland? Yes ☒ No ☐

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour \_\_\_\_\_ OHWM Mapped \_\_\_\_\_  
 Feature Designation: Perennial \_\_\_\_\_ Intermittent \_\_\_\_\_ Ephemeral \_\_\_\_\_  
 Natural Drainage \_\_\_\_\_ Artificial Drainage \_\_\_\_\_ Navigable Water \_\_\_\_\_

**Remarks:** Wetland parameters are present as indicated by a dominance of hydrophytic vegetation, and a primary hydrology indicator, water stained leaves, indicating recent inundation. Soils meet criteria for problematic hydric soils as low chroma may obscure total quantity of redox concentrations in this seasonally inundated area.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: 15' radius)				
1	Salexi Salix exigua	20	YES	FACW
2				
3				
4				
5				
		20	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5' radius)				
1	Phaar Phalaris arundinacea	60	YES	FACW
2	Leplat Lepidium latifolium	20	YES	FAC
3	Junbal Juncus balticus	10	NO	FACW
4				
5				
6				
7				
8				
9				
10				
11				
		90	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

% Bare Ground in Herb 10 % Cover of Biotic \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species 0	x 1 =	0
FACW species 90	x 2 =	180
FAC species 20	x 3 =	60
FACU species 0	x 4 =	0
UPL species 0	x 5 =	0
Column Totals: 110	(A)	240
Prevalence Index = B/A =		2.1818

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation  
 Yes 2 - Dominance Test is >50%  
 Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☒ No ☐

**Remarks:** Dominance of hydrophytic vegetation present (FAC and FACW species).



SOIL						Sampling Point: SP 108-10		
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10YR 2/2	98	10 YR 6/8	2	C	M	Loamy clay sand	Gravel throughout; Prominent redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input checked="" type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: <u>None</u>						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Depth (inches): <u>None</u>								
<b>Remarks:</b> Low chroma soils meet criteria for problematic hydric soils as some redox concentrations may be obscured. Area is dominated by hydrophytic vegetation and contains primary hydrology indicators. Agriculture and highway adjacent to site, which may also affect redox development in soils. Soils are presumed as hydric as site functions as a wetland.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input checked="" type="checkbox"/> Shallow Aquitard (D3)		
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):		<u>NA</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Water Table Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):		<u>NA</u>			
Saturation Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):		<u>NA</u>			
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Primary hydrology indicator is present as water-stained leaves, and one secondary indicator is present (dominant species pass FAC-neutral test).								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #10 City/County: Lassen County Sampling Date: 9/3/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: SP 109-10 Feature ID: U103-10  
 Investigator(s): M.Oats, K. Daniels Section, Township, Range: S2, T24N, R17E  
 Local relief (hillside, terrace, etc.): Terrace Local Relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR): D Lat: 39.95924 Long: 120.04036 Datum: NAD83  
 Soil Map Unit Name: (210) Fortsage silt loam, 0 to 2 percent slopes, hydric NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☐ No ☒  
 Hydric Soil Present? Yes ☐ No ☒  
 Wetland Hydrology Present? Yes ☐ No ☒

Is the Sampled Area within a Wetland? Yes ☐ No ☒

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour: \_\_\_\_\_ OHWM Mapped: \_\_\_\_\_  
 Feature Designation: Perennial: \_\_\_\_\_ Intermittent: \_\_\_\_\_ Ephemeral: \_\_\_\_\_  
 Natural Drainage: \_\_\_\_\_ Artificial Drainage: \_\_\_\_\_ Navigable Water: \_\_\_\_\_

Remarks: Sample confirmed as upland along slope where indicators of all three parameters are absent; upland pair point to W103-10.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0		= Total Cover

Sapling/Shrub Stratum (Plot size: 15' radius)	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
1	Arttri Artemisia tridentata	15	YES	UPL
2	Erinau Ericameria nauseosa	10	YES	UPL
3				
4				
5				
		25		= Total Cover

Herb Stratum (Plot size: 5' radius)	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
1	Agrcrri Agropyron cristatum	25	YES	UPL
2	Brotec Bromus tectorum	15	YES	UPL
3	Gricam Grindelia camporum	15	YES	FACW
4				
5				
6				
7				
8				
9				
10				
11				
		55		= Total Cover

Woody Vine Stratum (Plot size: _____)	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
1				
2				
		0		= Total Cover

% Bare Ground in Herb 45 % Cover of Biotic           

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.2 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species	0	x 1 = 0
FACW species	15	x 2 = 30
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	65	x 5 = 325
Column Totals:	80 (A)	355 (B)
Prevalence Index = B/A =		4.4375

**Hydrophytic Vegetation Indicators:**

- 1 - Rapid Test for Hydrophytic Vegetation  
 No 2 - Dominance Test is >50%  
 No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☐ No ☒

Remarks: Sample point dominated by mostly UPL vegetation.



## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #10 City/County: Lassen County Sampling Date: 9/4/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: SP 112-10 Feature ID: W105-10  
 Investigator(s): M. Oats, K. Daniels Section, Township, Range: S28, T25N, R17E  
 Local relief (hillside, terrace, etc.): Terrace Local Relief (concave, convex, none): Concave Slope (%): 4  
 Subregion (LRRN) D Lat: 39.99474 Long: -120.07861 Datum: NAD83  
 Soil Map Unit Name: (409) Water NWI classification: PABFx

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? ☐ Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? ☐ (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☒ No ☐  
 Hydric Soil Present? Yes ☒ No ☐  
 Wetland Hydrology Present? Yes ☒ No ☐

Is the Sampled Area within a Wetland? Yes ☒ No ☐

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour \_\_\_\_\_ OHWM Mapped \_\_\_\_\_  
 Feature Designation: Perennial \_\_\_\_\_ Intermittent \_\_\_\_\_ Ephemeral \_\_\_\_\_  
 Natural Drainage \_\_\_\_\_ Artificial Drainage \_\_\_\_\_ Navigable Water \_\_\_\_\_

**Remarks:** Wetland parameters are present as indicated by primary and secondary indicators including saturation and surface soil cracks, hydric soils (redox dark surface), and a dominance of hydrophytic vegetation.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: _____)				
1				
2				
3				
4				
5				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5' radius)				
1 Scinev	Scirpus nevadensis	10	NO	OBL
2 Schame	Schoenoplectus americanus	20	YES	OBL
3 Junbal	Juncus balticus	30	YES	FACW
4 Leplat	Lepidium latifolium	25	YES	FAC
5 Rumcri	Rumex crispus	5	NO	FAC
6				
7				
8				
9				
10				
11				
		90	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

% Bare Ground in Herb 10 % Cover of Biotic \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species	30	x 1 = 30
FACW species	30	x 2 = 60
FAC species	30	x 3 = 90
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	90 (A)	180 (B)
Prevalence Index = B/A = <u>2</u>		

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation  
 Yes 2 - Dominance Test is >50%  
 Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☒ No ☐

**Remarks:** Hydrophytic vegetation indicator present as evidenced by a dominance of OBL, FACW, and FAC species.

SOIL						Sampling Point: SP 112-10		
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 2/2	60					Silty clay	
	10 YR 3/2	40						
4-10	7.5 YR 2.5/1	80	5 YR 4/4	20	C	M	Silty clay	Prominent redox concentrations
10-16	10 YR 3/1	95	5 YR 4/4	5	C	M	Clay sand	Manganese concretions
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>								
Type: <u>None</u>			<b>Hydric Soil Present?</b>					
Depth (inches): <u>NA</u>			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
<b>Remarks:</b> Soil satisfies hydric soil indicator F6, redox dark surface, as it is a layer with a matrix that is at least 4 inches thick, starting at a depth of less than 8 inches, and has a matrix value of 3 or less and chroma of 1 and more than 2 percent prominent redox concentrations occurring as soft masses. The third layer also has manganese concretions present.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input checked="" type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input checked="" type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input checked="" type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>								
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Depth (inches): <u>NA</u>			<b>Wetland Hydrology Present?</b>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Depth (inches): <u>NA</u>			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			Depth (inches): <u>3</u>					
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Primary hydrology indicators present as evidenced by surface soil cracks and saturation in the soil pit (no water table present but adjacent to creek and therefore, has groundwater saturation present from creek presence). Dominant species pass FAC-neutral test and sediment deposits are present as secondary indicators (riverine).								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #10 City/County: Lassen County Sampling Date: 9/2/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: SP 113-10 Feature ID: U105-10  
 Investigator(s): M. Oats, K. Daniels Section, Township, Range: S28, T25N, R17E  
 Local relief (hillside, terrace, etc.): Hillside Local Relief (concave, convex, none): Convex Slope (%): 12  
 Subregion (LRR): D Lat: 39.99468 Long: -120.07855 Datum: NAD83  
 Soil Map Unit Name: (409) Water NWI classification: PABFx

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? ☐ Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? ☐ (If needed, explain any answers in Remarks.)  
**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☐ No ☒  
 Hydric Soil Present? Yes ☐ No ☒  
 Wetland Hydrology Present? Yes ☐ No ☒

Is the Sampled Area within a Wetland? Yes ☐ No ☒

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour: \_\_\_\_\_ OHWM Mapped: \_\_\_\_\_  
 Feature Designation: Perennial: \_\_\_\_\_ Intermittent: \_\_\_\_\_ Ephemeral: \_\_\_\_\_  
 Natural Drainage: \_\_\_\_\_ Artificial Drainage: \_\_\_\_\_ Navigable Water: \_\_\_\_\_

Remarks: Confirmed as upland along slope where indicators of all three parameters are absent; upland pair point to W105-10.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: 15' radius)				
1	Arttri Artemisia tridentata	50	YES	UPL
2	Erinau Ericameria nauseosa	15	YES	UPL
3				
4				
5				
		65	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5' radius)				
1	Brotec Bromus tectorum	30	YES	UPL
2	Leplat Lepidium latifolium	10	YES	FAC
3				
4				
5				
6				
7				
8				
9				
10				
11				
		40	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

% Bare Ground in Herb 60 % Cover of Biotic \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.25 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species 0	x 1 =	0
FACW species 0	x 2 =	0
FAC species 10	x 3 =	30
FACU species 0	x 4 =	0
UPL species 95	x 5 =	475
Column Totals: 105 (A)		505 (B)
Prevalence Index = B/A =		4.8095

**Hydrophytic Vegetation Indicators:**

- 1 - Rapid Test for Hydrophytic Vegetation  
 No 2 - Dominance Test is >50%  
 No 3 - Prevalence Index is  $\leq 3.0$ <sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☐ No ☒

Remarks: Sample point dominated by UPL vegetation.

SOIL							Sampling Point: SP 113-10	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10 YR 3/3	100					Silty loam	Gravel throughout
						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators:</b> (Applicable to all LRRs, unless otherwise noted.)								
<input type="checkbox"/> Histosol (A1) _____			<input type="checkbox"/> Sandy Redox (S5) _____			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2) _____			<input type="checkbox"/> Stripped Matrix (S6) _____			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3) _____			<input type="checkbox"/> Loamy Mucky Mineral (F1) _____			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4) _____			<input type="checkbox"/> Loamy Gleyed Matrix (F2) _____			<input type="checkbox"/> Reduced Vertic (F18) _____		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) _____			<input type="checkbox"/> Depleted Matrix (F3) _____			<input type="checkbox"/> Red Parent Material (TF2) _____		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) _____			<input type="checkbox"/> Redox Dark Surface (F6) _____			<input type="checkbox"/> Other (Explain in Remarks) _____		
<input type="checkbox"/> Depleted Below Dark Surface (A11) _____			<input type="checkbox"/> Depleted Dark Surface (F7) _____					
<input type="checkbox"/> Thick Dark Surface (A12) _____			<input type="checkbox"/> Redox Depressions (F8) _____					
<input type="checkbox"/> Sandy Mucky Mineral (S1) _____			<input type="checkbox"/> Vernal Pools (F9) _____					
<input type="checkbox"/> Sandy Gleyed Matrix (S4) _____								
						<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<b>Restrictive Layer (if present):</b>					<b>Hydric Soil Present?</b>			
Type: Rocky road prism					Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Depth (inches): 8								
<b>Remarks:</b> Soil pit lacks hydric soil indicators above restrictive layer (road bed).								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>			
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1) _____			<input type="checkbox"/> Salt Crust (B11) _____		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input type="checkbox"/> High Water Table (A2) _____			<input type="checkbox"/> Biotic Crust (B12) _____		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input type="checkbox"/> Saturation (A3) _____			<input type="checkbox"/> Aquatic Invertebrates (B13) _____		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) _____			<input type="checkbox"/> Hydrogen Sulfide Odor (C1) _____		<input type="checkbox"/> Drainage Patterns (B10) _____			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) _____			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) _____		<input type="checkbox"/> Dry-Season Water Table (C2) _____			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) _____			<input type="checkbox"/> Presence of Reduced Iron (C4) _____		<input type="checkbox"/> Crayfish Burrows (C8) _____			
<input type="checkbox"/> Surface Soil Cracks (B6) _____			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) _____		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) _____			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) _____			<input type="checkbox"/> Thin Muck Surface (C7) _____		<input type="checkbox"/> Shallow Aquitard (D3) _____			
<input type="checkbox"/> Water-Stained Leaves (B9) _____			<input type="checkbox"/> Other (Explain in Remarks) _____		<input type="checkbox"/> FAC-Neutral Test (D5) _____			
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): NA					Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): NA								
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #10 City/County: Lassen County Sampling Date: 9/4/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: SP 114-10 Feature ID: W106-10  
 Investigator(s): M. Oats, K. Daniels Section, Township, Range: S34, T25N, R17E  
 Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRRN) D Lat: 39.97846 Long: -120.06165 Datum: NAD83  
 Soil Map Unit Name: (342) Rose Creek loam, sodic, 0 to 2 percent slopes NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No ☐  
 Hydric Soil Present? Yes ☒ No ☐  
 Wetland Hydrology Present? Yes ☒ No ☐  
 Is the Sampled Area within a Wetland? Yes ☒ No ☐

## Evaluation of features designated "Other Waters"

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour \_\_\_\_\_ OHWM Mapped \_\_\_\_\_  
 Feature Designation: Perennial \_\_\_\_\_ Intermittent \_\_\_\_\_ Ephemeral \_\_\_\_\_  
 Natural Drainage \_\_\_\_\_ Artificial Drainage \_\_\_\_\_ Navigable Water \_\_\_\_\_

Remarks: Wetland parameters are present as indicated by hydrology indicator water marks (nonriverine), hydric soils (depleted matrix), and a dominance of hydrophytic vegetation.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: _____)				
1				
2				
3				
4				
5				
		0		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5' radius)				
1 Junbal	Juncus balticus	70	YES	FACW
2 Polmon	Polypogon monspeliensis	15	NO	FACW
3 Epical	Epilobium ciliatum	10	NO	FACW
4				
5				
6				
7				
8				
9				
10				
11				
		95		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: _____)				
1				
2				
		0		= Total Cover

% Bare Ground in Herb  5 % Cover of Biotic

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:  1 (A)

Total Number of Dominant Species Across All Strata:  1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC:  1 (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	0 x 1 =	0
FACW species	95 x 2 =	190
FAC species	0 x 3 =	0
FACU species	0 x 4 =	0
UPL species	0 x 5 =	0
Column Totals:	95 (A)	190 (B)
Prevalence Index = B/A =		2

## Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
 Yes 2 - Dominance Test is >50%  
 Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## Hydrophytic Vegetation Present?

Yes ☒ No ☐

Remarks: Hydrophytic vegetation indicator is present as evidenced by a dominance of FACW species.



SOIL							Sampling Point: SP 114-10	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 4/2	100					Sandy loam	No redox
4-12	10 YR 4/1	80	7.5 YR 5/6	20	C	M	Loamy sand	Prominent redox concentrations
12-16	10 YR 3/1	90	7.5 YR 4/6	10	C	M	Sandy clay loam	Prominent redox concentrations
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b> Type: <u>None</u> Depth (inches): <u>None</u>						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Hydric soil indicator F3 (Depleted Matrix) met with a layer at least 6 inches thick starting in the top 10 inches of soil surface, with redox concentrations (soft masses or pore linings), in a matrix with a value of 4 or more and chroma of 2 or less.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)						Secondary Indicators (2 or more required)		
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>NA</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>NA</u> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>NA</u> (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Primary hydrology indicator present as evidenced by water marks (nonriverine). Also, passes the secondary indicator of FAC-neutral test.								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #10 City/County: Lassen County Sampling Date: 9/4/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: 115-10 Feature ID: U106-10  
 Investigator(s): M. Oats, K. Daniels Section, Township, Range: S34, T25N, R17E  
 Local relief (hillside, terrace, etc.): Hillside Local Relief (concave, convex, none): Convex Slope (%): 4  
 Subregion (LRR): D Lat: 39.97854 Long: -120.06156 Datum: NAD83  
 Soil Map Unit Name: (342) Rose Creek loam, sodic, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☐ No ☒  
 Hydric Soil Present? Yes ☐ No ☒  
 Wetland Hydrology Present? Yes ☐ No ☒

Is the Sampled Area within a Wetland? Yes ☐ No ☒

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour \_\_\_\_\_ OHWM Mapped \_\_\_\_\_  
 Feature Designation: Perennial \_\_\_\_\_ Intermittent \_\_\_\_\_ Ephemeral \_\_\_\_\_  
 Natural Drainage \_\_\_\_\_ Artificial Drainage \_\_\_\_\_ Navigable Water \_\_\_\_\_

Remarks: Confirmed as upland along slope where indicators of all three parameters are absent; upland pair point to W106-10.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0		= Total Cover

Sapling/Shrub Stratum (Plot size: 15' radius)	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
1 Arttri	Artemisia tridentata	20	YES	UPL
2				
3				
4				
5				
		20		= Total Cover

Herb Stratum (Plot size: 5' radius)	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
1 Leycin	Leymus cinereus	25	YES	FAC
2 Lepper	Lepidium perfoliatum	20	YES	FACU
3 Leycon	Leymus condensatus	35	YES	FACU
4				
5				
6				
7				
8				
9				
10				
11				
		80		= Total Cover

Woody Vine Stratum (Plot size: _____)	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
1				
2				
		0		= Total Cover

% Bare Ground in Herb 20 % Cover of Biotic \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.25 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>25</u>	x 3 =	<u>75</u>
FACU species <u>55</u>	x 4 =	<u>220</u>
UPL species <u>20</u>	x 5 =	<u>100</u>
Column Totals: <u>100</u> (A)		<u>395</u> (B)
Prevalence Index = B/A =		<u>3.95</u>

**Hydrophytic Vegetation Indicators:**

- 1 - Rapid Test for Hydrophytic Vegetation  
 No 2 - Dominance Test is >50%  
 No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☐ No ☒

Remarks: Sample point dominated by UPL, FACU, and FAC vegetation.

[illegible]

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #10 City/County: Lassen County Sampling Date: 9/10/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: SP 200-10 Feature ID: W200-10  
 Investigator(s): M. Oats, T. Kayatsky, P. Ferral Section, Township, Range: S20, T25N, R17E  
 Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRRN) D Lat: 40.00887 Long: -120.09089 Datum: NAD83  
 Soil Map Unit Name: (143) Calpine sandy loam, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☒ No ☐  
 Hydric Soil Present? Yes ☒ No ☐  
 Wetland Hydrology Present? Yes ☒ No ☐  
 Is the Sampled Area within a Wetland? Yes ☒ No ☐

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour \_\_\_\_\_ OHWM Mapped \_\_\_\_\_  
 Feature Designation: Perennial \_\_\_\_\_ Intermittent \_\_\_\_\_ Ephemeral \_\_\_\_\_  
 Natural Drainage \_\_\_\_\_ Artificial Drainage \_\_\_\_\_ Navigable Water \_\_\_\_\_

**Remarks:** Wetland parameters were evidenced by the dominance of hydrophytic vegetation, hydric soils (presence of hydrogen sulfide odor), and primary hydrology indicators (high water table and saturation, indicating saturated soils).

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: 15' radius)				
1	Salexi Salix exigua	80	YES	FACW
2				
3				
4				
5				
		80	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5' radius)				
1	Elepal Eleocharis palustris	40	YES	OBL
2	Polmon Polypogon monspeliensis	25	YES	FACW
3	Ranali Ranunculus alismifolius	5	NO	FACW
4	Lemmin Lemna minor	10	NO	OBL
5				
6				
7				
8				
9				
10				
11				
		80	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

% Bare Ground in Herb 20 % Cover of Biotic 0

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species	50	x 1 = 50
FACW species	110	x 2 = 220
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	160 (A)	270 (B)
Prevalence Index = B/A =		1.6875

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation  
 Yes 2 - Dominance Test is >50%  
 Yes 3 - Prevalence Index is  $\leq 3.0$ <sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☒ No ☐

**Remarks:** Hydrophytic vegetation indicator present as indicated by a dominance of FACW and OBL species.

SOIL						Sampling Point: SP 200-10		
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	2.5YR 3/1	100					Sand	
5-14	2.5Y 2/1	100					Sandy clay	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)		<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>				
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )				
<input type="checkbox"/> Black Histic (A3)		<input type="checkbox"/> Loamy Mucky Mineral (F1)		<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )				
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4)		<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Reduced Vertic (F18)				
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )		<input type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Red Parent Material (TF2)				
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )		<input type="checkbox"/> Redox Dark Surface (F6)		<input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)		<input type="checkbox"/> Depleted Dark Surface (F7)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
<input type="checkbox"/> Thick Dark Surface (A12)		<input type="checkbox"/> Redox Depressions (F8)						
<input type="checkbox"/> Sandy Mucky Mineral (S1)		<input type="checkbox"/> Vernal Pools (F9)						
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: <u>None</u>						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Depth (inches): <u>None</u>								
<b>Remarks:</b> Hydric soil indicator met by the presence of hydrogen sulfide (A4), as observed on site in sample pit.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>				
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )				
<input checked="" type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )				
<input checked="" type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )				
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)		<input checked="" type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)				
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>NA</u>		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>1</u>						
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>2.5</u>						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Primary hydrology indicators are present including highwater table observed at the surface and saturation observed at 1 inch and saturation observed at 2.5 inches. Additionally one secondary indicator was present (dominant species passed FAC-neutral test).								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #10 City/County: Lassen County Sampling Date: 9/10/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: SP 201-10 Feature ID: U200-10  
 Investigator(s): M. Oats, K. Daniels Section, Township, Range: S20, T25N, R17E  
 Local relief (hillside, terrace, etc.): Terrace Local Relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR): D Lat: 40.00882 Long: -120.09106 Datum: NAD83  
 Soil Map Unit Name: (143) Calpine sandy loam, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☐ No ☒  
 Hydric Soil Present? Yes ☐ No ☒  
 Wetland Hydrology Present? Yes ☐ No ☒

Is the Sampled Area within a Wetland? Yes ☐ No ☒

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour: \_\_\_\_\_ OHWM Mapped: \_\_\_\_\_  
 Feature Designation: Perennial: \_\_\_\_\_ Intermittent: \_\_\_\_\_ Ephemeral: \_\_\_\_\_  
 Natural Drainage: \_\_\_\_\_ Artificial Drainage: \_\_\_\_\_ Navigable Water: \_\_\_\_\_

Remarks: Sample confirmed as upland along slight slope where indicators of all three parameters are absent; upland pair point to W200-10.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1				
2				
3				
4				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: 15' radius)				
1	Arttri Artemisia tridentata	50	YES	UPL
2	Salexi Salix exigua	25	YES	FACW
3				
4				
5				
		75	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5' radius)				
1	Brotec Bromus tectorum	60	YES	UPL
2	Disspi Distichlis spicata	30	YES	FAC
3	Junbal Juncus balticus	5	NO	FACW
4				
5				
6				
7				
8				
9				
10				
11				
		95	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

% Bare Ground in Herb  10 % Cover of Biotic  0

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC:  2 (A)

Total Number of Dominant Species Across All Strata:  4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC:  0.5 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species	0	x 1 = 0
FACW species	30	x 2 = 60
FAC species	30	x 3 = 90
FACU species	0	x 4 = 0
UPL species	110	x 5 = 550
Column Totals:	170 (A)	700 (B)
Prevalence Index = B/A =		4.1176

**Hydrophytic Vegetation Indicators:**

- 1 - Rapid Test for Hydrophytic Vegetation
- No 2 - Dominance Test is >50%
- No 3 - Prevalence Index is ≤3.0<sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants<sup>1</sup>
- 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes ☐ No ☒

Remarks: Sample point predominantly dominated by UPL.

SOIL						Sampling Point: SP 201-10		
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR 3/2	100					Sandy loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b>					<b>Hydric Soil Present?</b>			
Type: Road prism					Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Depth (inches): 5								
<b>Remarks:</b> Soil pit lacks hydric soil indicator above restrictive layer (road prism).								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)				<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)				<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)				<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)				<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)				<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)				<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)				<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)				<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)				<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	NA		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	NA				
Saturation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	NA				
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #8 City/County: Lassen County Sampling Date: 9/3/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: 100-10 Feature ID: NW100-10  
 Investigator(s): M.Oats, K. Daniels Section, Township, Range: S12, T26N, R15E  
 Local relief (hillside, terrace, etc.): Depression/Roadside Swale Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 40.12171 Long: -120.24113 Datum: NAD83  
 Soil Map Unit Name: (289) Mottsville gravelly loamy coarse sand, 0 to 2 percent slopes NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes ☐ No ☒  
 Hydric Soil Present? Yes ☐ No ☒  
 Wetland Hydrology Present? Yes ☐ No ☒

Is the Sampled Area within a Wetland? Yes ☐ No ☒

**Evaluation of features designated "Other Waters"**

Characteristics: Type: \_\_\_\_\_ Width: \_\_\_\_\_ Substrate: \_\_\_\_\_  
 Indicators: Defined bed and bank: \_\_\_\_\_ Scour \_\_\_\_\_ OHWM Mapped \_\_\_\_\_  
 Feature Designation: Perennial \_\_\_\_\_ Intermittent \_\_\_\_\_ Ephemeral \_\_\_\_\_  
 Natural Drainage \_\_\_\_\_ Artificial Drainage \_\_\_\_\_ Navigable Water \_\_\_\_\_

**Remarks:** Suspect area confirmed as upland where indicators of hydric soil indicators and hydrophytic vegetation are absent. There is a presence of secondary hydrology indicator (drainage patterns for periodic water flow) but lacks OHWM or indicators of regular unundation to support wetlands or to support an other waters determination.

**VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)				
1 Elaang	Elaeagnus angustifolia	15	YES	FAC
2				
3				
4				
		15	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)				
1 Arttri	Artemisia tridentata	15	YES	UPL
2				
3				
4				
5				
		15	= Total Cover	

Herb Stratum (Plot size: 5' radius)				
1 Carex sp.	Carex spp.	35	YES	FACW
2 Madele	Madia elegans	30	YES	UPL
3 Lacser	Lactuca serriola	15	NO	FACU
4 Vertha	Verbascum thapsus	10	NO	FACU
5 Equale	Equisetum laevigatum	10	NO	FACW
6				
7				
8				
9				
10				
11				
		100	= Total Cover	

Woody Vine Stratum (Plot size: _____)				
1				
2				
		0	= Total Cover	

% Bare Ground in Herb ☐ 0 % Cover of Biotic ☐

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: ☐ 2 (A)

Total Number of Dominant Species Across All Strata: ☐ 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ☐ 0.5 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <input type="checkbox"/> 0	x 1 = <input type="checkbox"/> 0
FACW species <input type="checkbox"/> 45	x 2 = <input type="checkbox"/> 90
FAC species <input type="checkbox"/> 15	x 3 = <input type="checkbox"/> 45
FACU species <input type="checkbox"/> 25	x 4 = <input type="checkbox"/> 100
UPL species <input type="checkbox"/> 45	x 5 = <input type="checkbox"/> 225
Column Totals: <input type="checkbox"/> 130 (A)	<input type="checkbox"/> 460 (B)
Prevalence Index = B/A = <input type="checkbox"/> 3.5385	

**Hydrophytic Vegetation Indicators:**

- 1 - Rapid Test for Hydrophytic Vegetation  
 No 2 - Dominance Test is >50%  
 No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

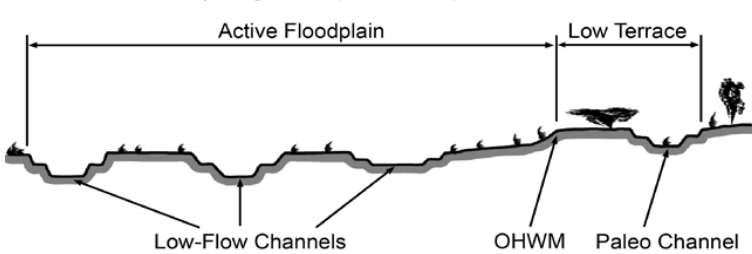
Yes ☐ No ☒

**Remarks:** Hydrophytic vegetation absent as indicated by a dominance of UPL, FAC, and FACW species. Carex species unidentifiable (heads abser





### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 01-11		<b>Feature ID:</b> D01-11		<b>Date:</b> 9/4/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.89325, -120.01706		
<b>Potential anthropogenic influences on the channel system:</b> Flows under HWY 395 (through to culverts stacked on one another). Appears to be an intermittent stream that is dry at time of survey.					
<b>Brief site description:</b> Intermittent stream crosses highway through culverts. Stream runs from the upslope northeast of the highway.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS Imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <div style="margin-left: 20px;">           a) Record the floodplain unit and GPS position.             b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.            c) Identify any indicators present at the location.         </div> 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer         </div> <div style="text-align: center;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:         </div> </div>					

### Wentworth Size Classes

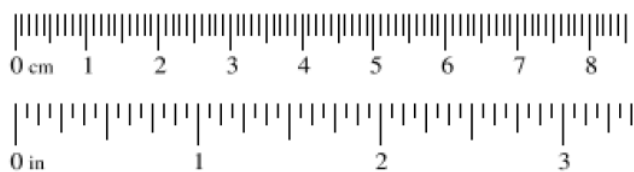
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud

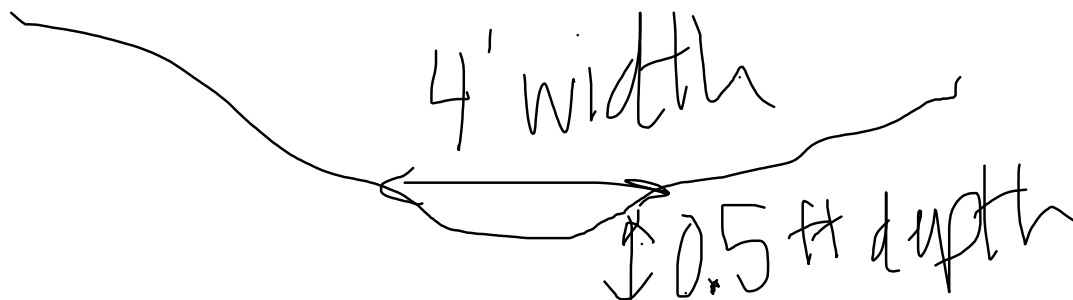


Feature ID: D01-11

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Defined bed and bank feature. Change in vegetation cover present at OHWM. Gentle break in slope present. Sediment change from loamy upland soil to sandy bottom with boulders present in the bed of the channel. Sampling point documents an intermittent stream.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: SandTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 2 %

Community successional stage:

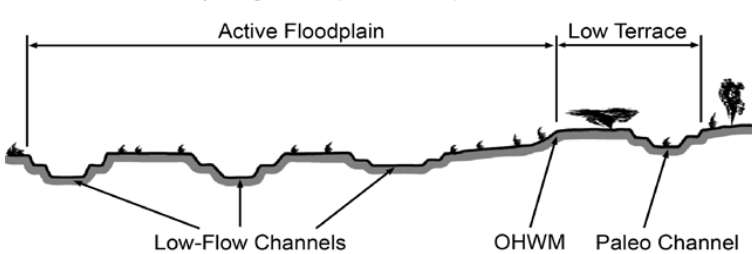
☐ NA☒ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☐ Soil development☒ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

No water present in low-flow channel. Surface relief is present and the bed has a sandy bottom of low flow channel.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input checked="" type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# **Arid West Ephemeral and Intermittent Streams OHWM Datasheet**

<b>Sampling Point:</b> SP 02-11		<b>Feature ID:</b> D02-11		<b>Date:</b> 9/4/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.90823, -120.0126		
<b>Potential anthropogenic influences on the channel system:</b> Flows under HWY 395 (through box culvert). Appears to be an intermittent stream that is dry at time of survey.					
<b>Brief site description:</b> Intermittent stream crosses highway through box culvert. Stream seems to start within ROW from a groundwater seep.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS Imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer         </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:         </div> </div>					

### Wentworth Size Classes

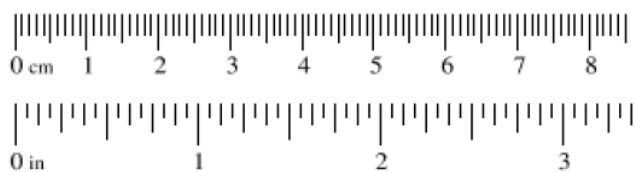
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud



Feature ID: D02-11

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Defined bed and bank feature. Change in vegetation cover present at OHWM. Sharp break in slope present. Sediment changed from loamy upland soil to sandy bottom with boulders present in the bed of the channel.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: SandTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

☒ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☐ Soil development☒ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

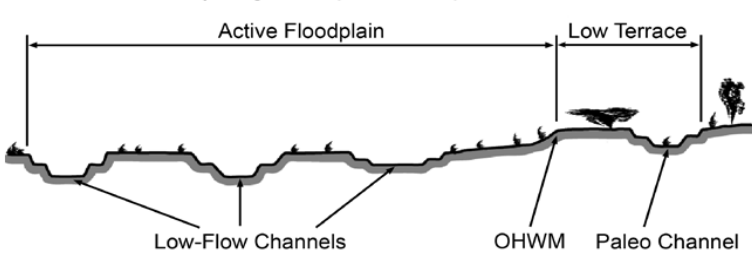
No water present in low-flow channel. Surface relief is present and the bed has a sandy bottom of low flow channel.



Feature ID:	Cross section ID:	Date:	Time:
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input checked="" type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Loamy sand</u>			
Total veg cover: <u>90</u> % Tree: _____ % Shrub: <u>50</u> % Herb: <u>40</u> %			
Community successional stage:			
<input type="checkbox"/> NA		<input checked="" type="checkbox"/> Mid (herbaceous, shrubs, saplings)	
<input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks		<input type="checkbox"/> Soil development	
<input type="checkbox"/> Ripples		<input type="checkbox"/> Surface relief	
<input type="checkbox"/> Drift and/or debris		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Presence of bed and bank		<input type="checkbox"/> Other: _____	
<input checked="" type="checkbox"/> Benches		<input type="checkbox"/> Other: _____	
<b>Comments:</b>			
Mapped active floodplain as TOB, has riparian vegetation but not other wetland indicators.			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA		<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)	
<input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks		<input type="checkbox"/> Soil development	
<input type="checkbox"/> Ripples		<input type="checkbox"/> Surface relief	
<input type="checkbox"/> Drift and/or debris		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Presence of bed and bank		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Benches		<input type="checkbox"/> Other: _____	
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 03-11		<b>Feature ID:</b> D03-11		<b>Date:</b> 8/27/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?				<b>Location Details:</b> Along Highway 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.92177, -120.01858
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
<b>Potential anthropogenic influences on the channel system:</b> Excavated irrigation canal, adjacent to freshwater emergent wetland.					
<b>Brief site description:</b> Irrigation canal that runs parallel to highway, also has a culvert that goes under highway conveying water through it.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS Imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies: </div> <div> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </div> </div>					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>   </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other: _____ </div> </div> </li> </ol>					

### Wentworth Size Classes

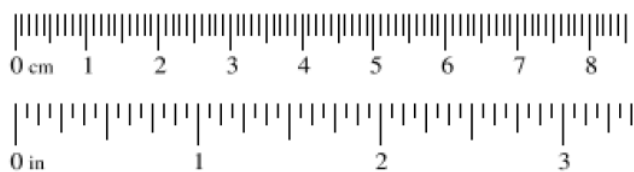
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud

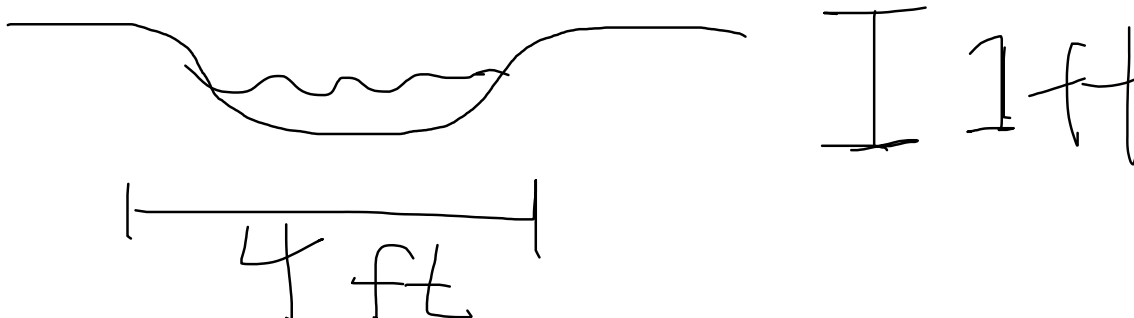


Feature ID: D03-11

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Constructed bed and bank feature. OHWM evidenced by change in sediment texture, break in bank slope, and change in vegetation cover. Sampling point documents an irrigation canal.

Floodplain unit:☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

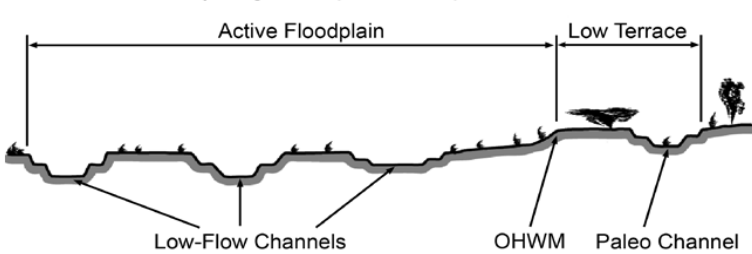
Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 06-11		<b>Feature ID:</b> D04-11		<b>Date:</b> 9/4/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Along Highway 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.93113, -120.01949		
<b>Potential anthropogenic influences on the channel system:</b> Flows under HWY 395 (under bridge). Perennial stream with water present.					
<b>Brief site description:</b> Perennial stream (Long Valley Creek) crosses highway through bridge.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS Imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <div style="margin-left: 20px;">           a) Record the floodplain unit and GPS position.             b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.            c) Identify any indicators present at the location.         </div> 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer         </div> <div style="text-align: center;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:         </div> </div>					

### Wentworth Size Classes

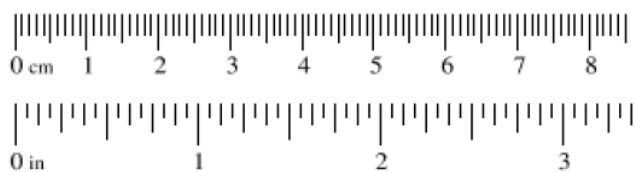
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud

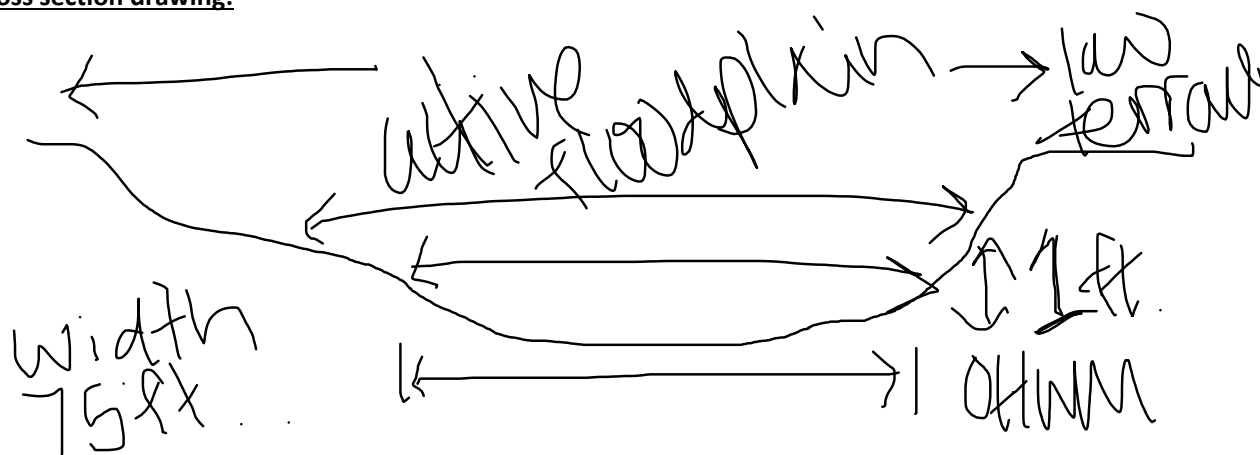


Feature ID: D04-11

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Defined bed and bank feature. OHWM evidenced by change in vegetation cover and sediment change present at OHWM. Additionally, gentle break in bank slope present. Sampling point documents a perennial stream.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: SandTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

☒ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☒ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

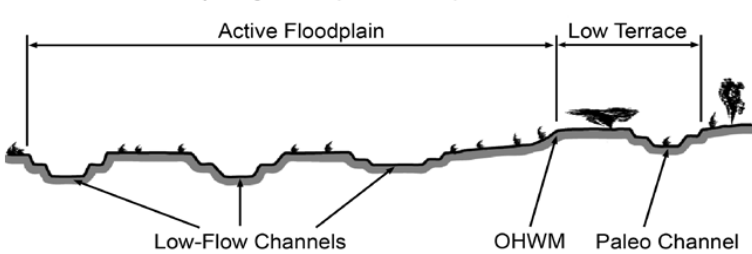
Flowing water present in low-flow channel. Sediment deposits are present on areas without water of low-flow channel.



Feature ID:	Cross section ID:	Date:	Time:
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input checked="" type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Silty clay</u>			
Total veg cover: <u>80</u> % Tree: <u>0</u> % Shrub: <u>20</u> % Herb: <u>60</u> %			
Community successional stage:			
<input type="checkbox"/> NA		<input checked="" type="checkbox"/> Mid (herbaceous, shrubs, saplings)	
<input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks		<input type="checkbox"/> Soil development	
<input type="checkbox"/> Ripples		<input type="checkbox"/> Surface relief	
<input type="checkbox"/> Drift and/or debris		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Presence of bed and bank		<input type="checkbox"/> Other: _____	
<input checked="" type="checkbox"/> Benches		<input type="checkbox"/> Other: _____	
<b>Comments:</b>			
Scirpus, eliochorus present within active floodplain; acting as fringe riparian in a narrow area along the creek.			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input checked="" type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: <u>70</u> % Tree: _____ % Shrub: <u>40</u> % Herb: <u>30</u> %			
Community successional stage:			
<input type="checkbox"/> NA		<input checked="" type="checkbox"/> Mid (herbaceous, shrubs, saplings)	
<input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks		<input type="checkbox"/> Soil development	
<input type="checkbox"/> Ripples		<input type="checkbox"/> Surface relief	
<input type="checkbox"/> Drift and/or debris		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Presence of bed and bank		<input type="checkbox"/> Other: _____	
<input checked="" type="checkbox"/> Benches		<input type="checkbox"/> Other: _____	
<b>Comments:</b>			
Fringe area along creek; low terrace above stream.			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 10-11		<b>Feature ID:</b> D05-11		<b>Date:</b> 9/5/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Along Highway 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.82044, -120.03505			
<b>Potential anthropogenic influences on the channel system:</b> Drainage parallels HWY 395. Appears to be an ephemeral drainage that is dry at time of survey.					
<b>Brief site description:</b> Ephemeral drainage, manipulated for storm drainage. Stream runs from the upslope north end on east side of highway.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS Imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

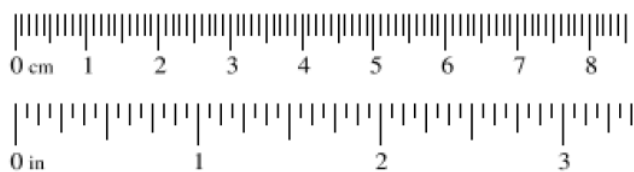
Inches (in)	Millimeters (mm)	Wentworth size class
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0.039	1.00	Very coarse sand
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1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud

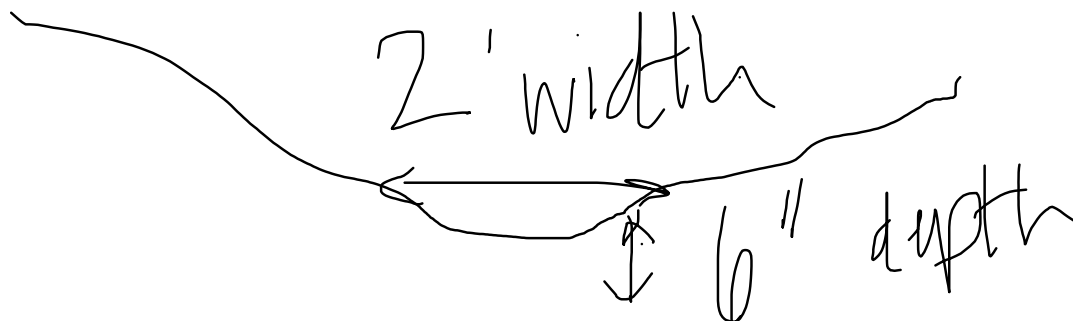


Feature ID: D05-11

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:

- ☒ Change in average sediment texture  
☐ Change in vegetation species  
☐ Change in vegetation cover

- ☒ Break in bank slope  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

Comments:

Gentle break in slope. Some sediment change with a slightly sandy texture within the channel.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: Sandy loamTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 20 %

Community successional stage:

- ☐ NA  
☒ Early (herbaceous & seedlings)  
☐ Mid (herbaceous, shrubs, saplings)  
☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks  
☐ Ripples  
☐ Drift and/or debris  
☒ Presence of bed and bank  
☐ Benches

- ☐ Soil development  
☒ Surface relief  
☒ Other: Surface soil cracks  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

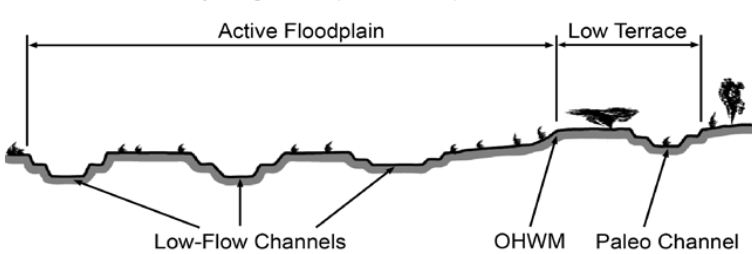
Comments:

No water present in low-flow channel. Surface relief is present and the bed has surface soil cracks in the low-flow channel.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 11-11		<b>Feature ID:</b> D06-11		<b>Date:</b> 9/5/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.82374, -120.03603		
<b>Potential anthropogenic influences on the channel system:</b> Drainage parallels HWY 395. Appears to be an ephemeral drainage that is dry at time of survey.					
<b>Brief site description:</b> Ephemeral drainage, manipulated for storm drainage. Stream runs on east side of highway.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS Imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

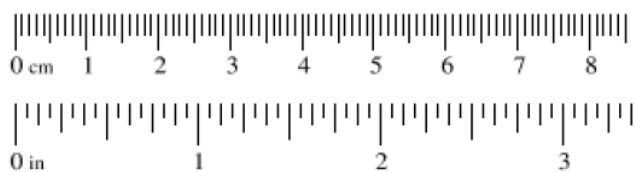
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud



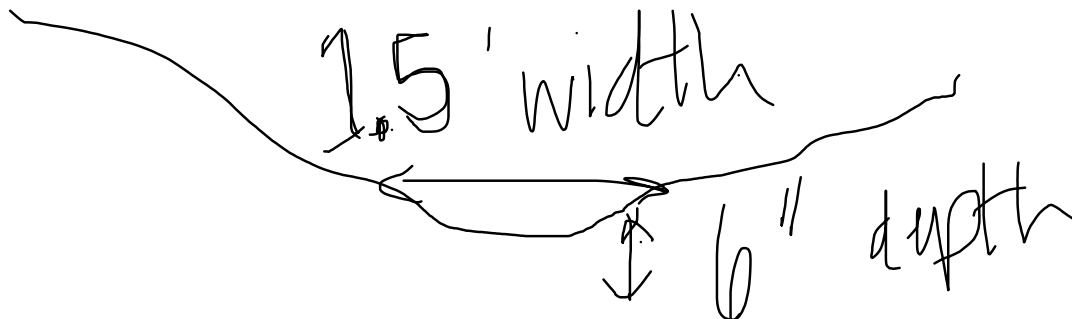
Feature ID: D06-11

Cross section ID:

Date:

Time:

Cross section drawing:



OHWM

GPS point: \_\_\_\_\_

**Indicators:**

☒ Change in average sediment texture

☐ Change in vegetation species

☒ Change in vegetation cover

☒ Break in bank slope

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

**Comments:**

Moderate break in slope. Some sediment change and there's less percent cover of vegetation within OHWM.

Floodplain unit:

☒ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: Sandy loam

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 5 %

Community successional stage:

☐ NA

☒ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

**Indicators:**

☒ Mudcracks

☐ Ripples

☐ Drift and/or debris

☒ Presence of bed and bank

☐ Benches

☐ Soil development

☒ Surface relief

☒ Other: Surface soil cracks

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

**Comments:**

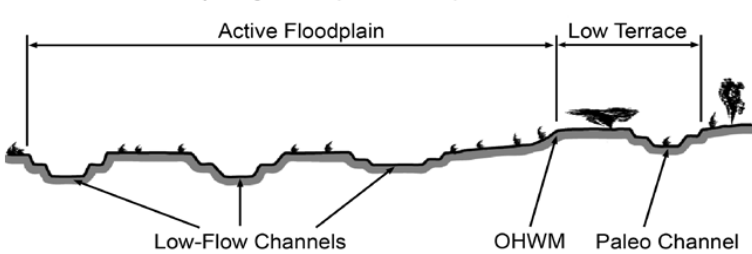
No water present in low-flow channel. Surface relief is present and the bed has surface soil cracks in the low-flow channel.



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 12-11		<b>Feature ID:</b> D07-11		<b>Date:</b> 9/5/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Along Highway 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.82957, -120.03726		
<b>Potential anthropogenic influences on the channel system:</b> Drainage crosses under HWY 395. Appears to be an intermittent drainage that is dry at time of survey.					
<b>Brief site description:</b> Intermittent drainage runs under highway. Fence line present at ROW.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS Imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph <input type="checkbox"/> Digitized on computer		<input checked="" type="checkbox"/> GPS <input type="checkbox"/> Other:			

### Wentworth Size Classes

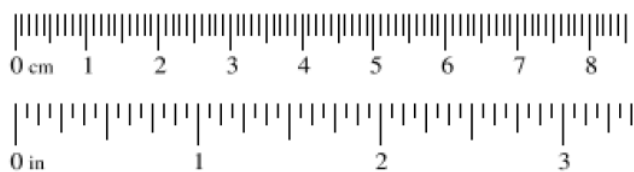
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud

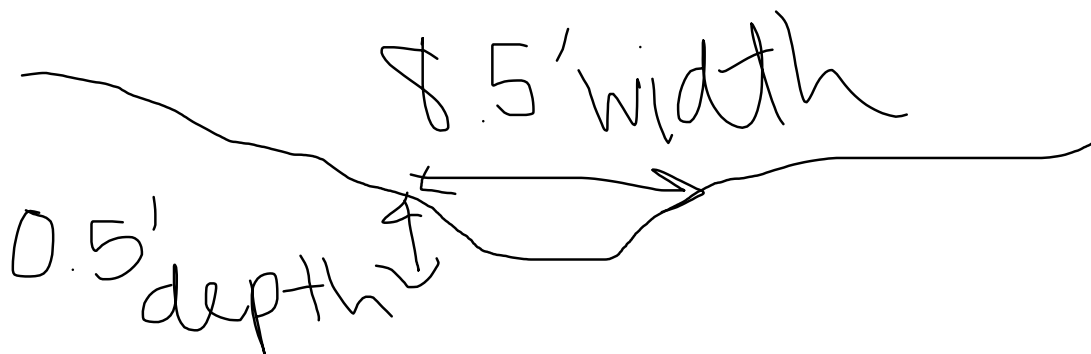


Feature ID: D07-11

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Gentle break in slope. Some sediment change and there's less percent cover of vegetation within OHWM.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: Sandy loamTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 5 %

Community successional stage:

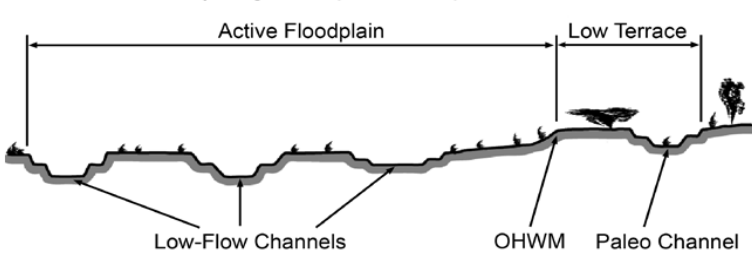
☐ NA☒ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☒ Drift and/or debris☒ Presence of bed and bank☐ Benches☐ Soil development☒ Surface relief☒ Other: Surface soil cracks☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

No water present in low-flow channel. Surface relief is present and the bed has some drift deposits and surface soil cracks in the low-flow channel.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel <input checked="" type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace		
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Silty loam</u>			
Total veg cover: <u>20</u> % Tree: <u>0</u> % Shrub: <u>0</u> % Herb: <u>20</u> %			
Community successional stage:			
<input type="checkbox"/> NA <input checked="" type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Mid (herbaceous, shrubs, saplings) <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks <input type="checkbox"/> Ripples <input type="checkbox"/> Drift and/or debris <input type="checkbox"/> Presence of bed and bank <input checked="" type="checkbox"/> Benches		<input type="checkbox"/> Soil development <input type="checkbox"/> Surface relief <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	
<b>Comments:</b>			
Mapped as TOB, has indicators of benches and some herbaceous vegetation in the transition area.			

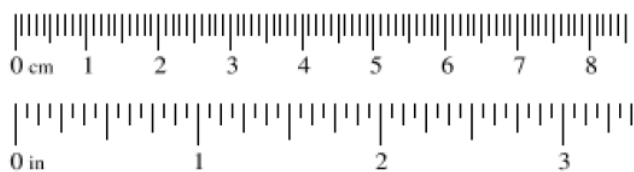
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace		
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA <input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Mid (herbaceous, shrubs, saplings) <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks <input type="checkbox"/> Ripples <input type="checkbox"/> Drift and/or debris <input type="checkbox"/> Presence of bed and bank <input type="checkbox"/> Benches		<input type="checkbox"/> Soil development <input type="checkbox"/> Surface relief <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 13-11		<b>Feature ID:</b> D08-11		<b>Date:</b> 9/5/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Along Highway 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.83280, -120.03807		
<b>Potential anthropogenic influences on the channel system:</b> Drainage crosses under HWY 395 through culvert. Appears to be an ephemeral drainage that is dry at time of survey.					
<b>Brief site description:</b> Ephemeral drainage runs under highway. Fence line present at ROW.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS Imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <div style="margin-left: 20px;">           a) Record the floodplain unit and GPS position.             b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.            c) Identify any indicators present at the location.         </div> 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer         </div> <div style="text-align: center;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:         </div> </div>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

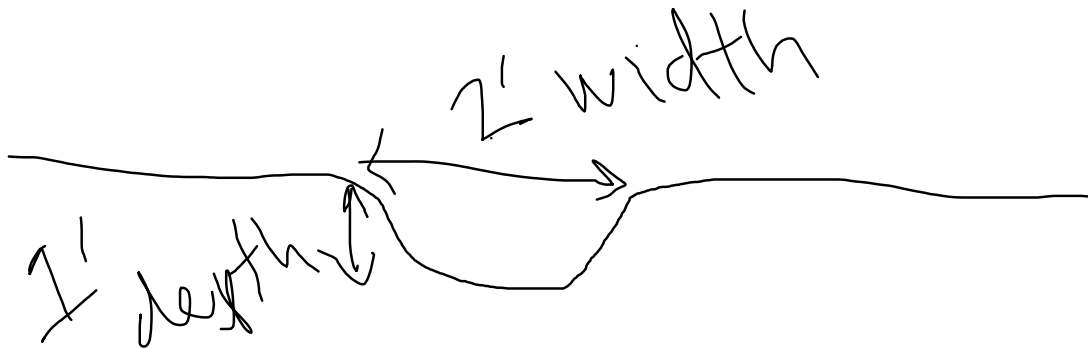


Feature ID: D08-11

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☒ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Bed and bank feature. OHWM evidenced by gentle break in slope, change in sediment texture, and changes in vegetation species and cover. Sampling point documents an ephemeral stream.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: SandTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 10 %

Community successional stage:

☐ NA☒ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☐ Soil development☒ Surface relief☒ Other: Sediment deposits; sorting☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

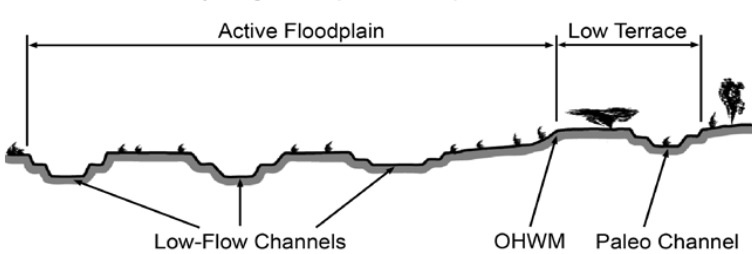
No water present in low-flow channel. Surface relief is present and the bed has sediment deposits in the low-flow channel.



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 14-11		<b>Feature ID:</b> D09-11		<b>Date:</b> 9/5/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Along Highway 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.83343, -120.03809		
<b>Potential anthropogenic influences on the channel system:</b> Drainage crosses under HWY 395 through culvert. 20 foot section of drainage closest to road appears excavated. Appears to be an ephemeral drainage that is dry at time of survey.					
<b>Brief site description:</b> Ephemeral drainage runs under highway. Fence line present at ROW.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS Imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph <input type="checkbox"/> Digitized on computer		<input checked="" type="checkbox"/> GPS <input type="checkbox"/> Other: _____			

### Wentworth Size Classes

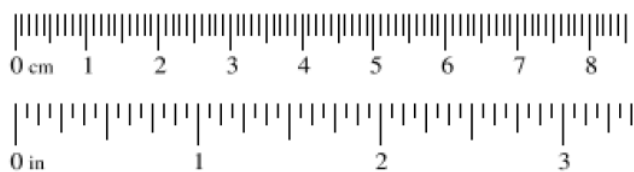
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud

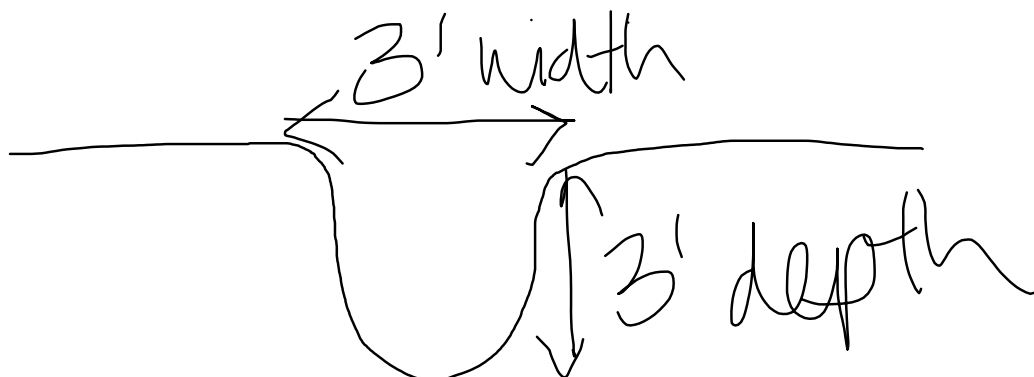


Feature ID: D09-11

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☒ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Bed and bank feature with scoured channel. OHWM evidenced by gentle break in slope, change in sediment texture, and changes in vegetation species and cover. Sampling point documents an ephemeral stream.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: Silty loamTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

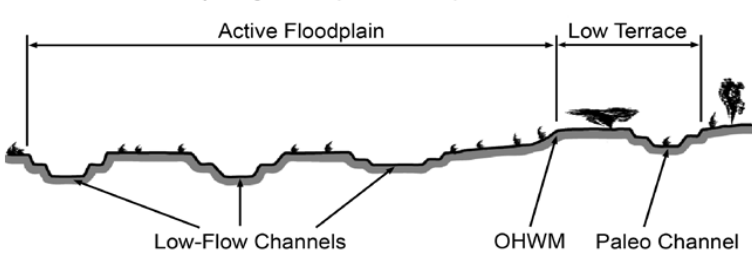
☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☒ Drift and/or debris☒ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

No water present in low-flow channel. There is drift and debris present within channel, channel is incised outside of the area where it has been excavated (area close to highway).

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA		<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)	
<input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks		<input type="checkbox"/> Soil development	
<input type="checkbox"/> Ripples		<input type="checkbox"/> Surface relief	
<input type="checkbox"/> Drift and/or debris		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Presence of bed and bank		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Benches		<input type="checkbox"/> Other: _____	
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA		<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)	
<input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks		<input type="checkbox"/> Soil development	
<input type="checkbox"/> Ripples		<input type="checkbox"/> Surface relief	
<input type="checkbox"/> Drift and/or debris		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Presence of bed and bank		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Benches		<input type="checkbox"/> Other: _____	
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 15-11		<b>Feature ID:</b> D10-11		<b>Date:</b> 9/5/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.83675, -120.03872		
<b>Potential anthropogenic influences on the channel system:</b> Drainage crosses under HWY 395 through culvert. 20 foot section of drainage closest to road appears excavated. Appears to be an intermittent drainage that is dry at time of survey.					
<b>Brief site description:</b> Intermittent drainage runs under highway. Fence line present at ROW. Large amounts of erosion.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph <input type="checkbox"/> Digitized on computer		<input checked="" type="checkbox"/> GPS <input type="checkbox"/> Other:			

### Wentworth Size Classes

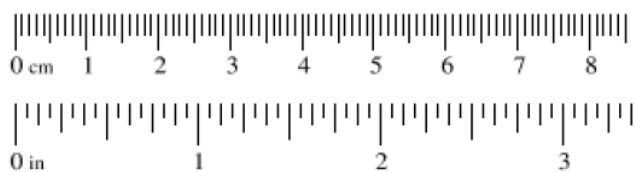
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud

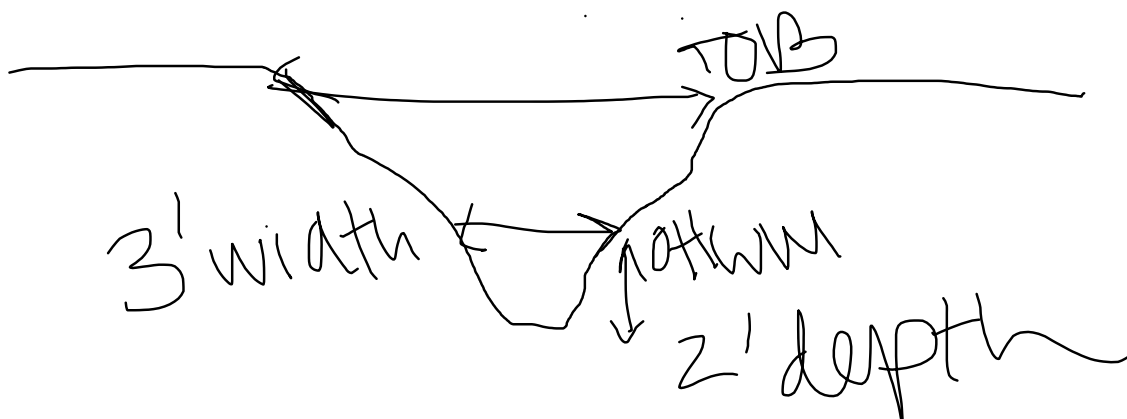


Feature ID: D10-11

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Bed and bank feature with scoured channel. OHWM evidenced by sharp break in bank slope, change in sediment texture, and change in vegetation cover. Sampling point documents an intermittent stream.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: Silty loamTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☒ Soil development☐ Surface relief☒ Other: Sorting, sediment deposits☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

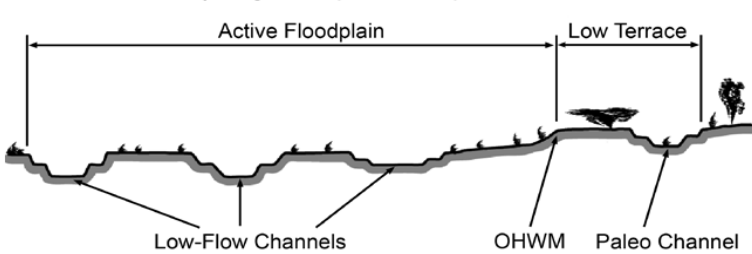
No water present in low-flow channel. There is sorting and sediment deposits present within channel, channel has erosion from TOB outside of the area where it has been excavated (area close to highway).



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 16-11		<b>Feature ID:</b> D11-11		<b>Date:</b> 9/5/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.83800, -120.03897		
<b>Potential anthropogenic influences on the channel system:</b> Drainage crosses under HWY 395 through culvert. 20 foot section of drainage closest to road appears excavated. Appears to be an ephemeral drainage that is dry at time of survey.					
<b>Brief site description:</b> Ephemeral drainage runs under highway. Fence line present at ROW.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <div style="margin-left: 20px;">           a) Record the floodplain unit and GPS position.             b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.            c) Identify any indicators present at the location.         </div> 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer         </div> <div style="text-align: center;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:         </div> </div>					

### Wentworth Size Classes

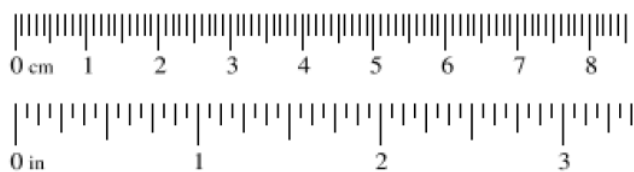
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud

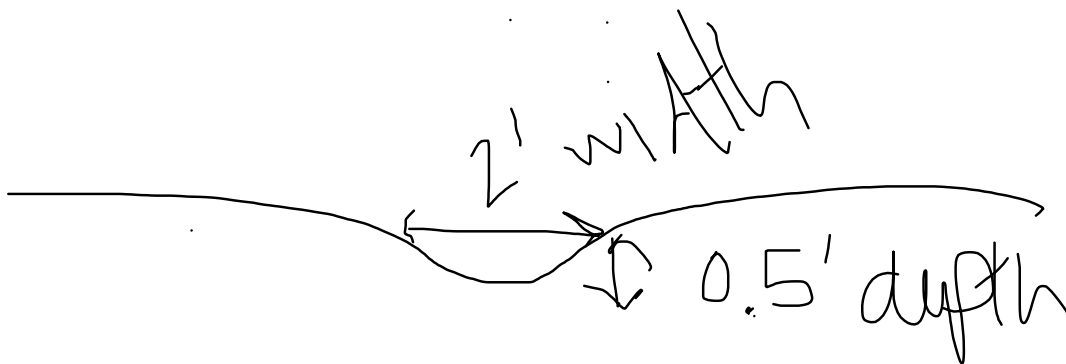


Feature ID: D11-11

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Bed and bank feature with scoured channel. OHWM evidenced by gentle break in slope, sediment change with sediment deposits. Sampling point documents an ephemeral stream.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: Silty sandy loamTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

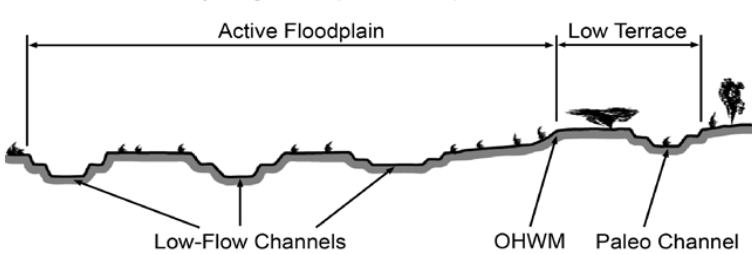
☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☒ Soil development☐ Surface relief☒ Other: Sorting, sediment deposits☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

No water present in low-flow channel. There is sorting and sediment deposits present within channel in area outside of excavation (about 20 feet from highway).

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>		
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace					
<b>GPS point:</b> _____					
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____% Community successional stage: <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>					
<b>Indicators:</b> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </td> </tr> </table>				<input type="checkbox"/> Mudcracks <input type="checkbox"/> Ripples <input type="checkbox"/> Drift and/or debris <input type="checkbox"/> Presence of bed and bank <input type="checkbox"/> Benches	<input type="checkbox"/> Soil development <input type="checkbox"/> Surface relief <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____
<input type="checkbox"/> Mudcracks <input type="checkbox"/> Ripples <input type="checkbox"/> Drift and/or debris <input type="checkbox"/> Presence of bed and bank <input type="checkbox"/> Benches	<input type="checkbox"/> Soil development <input type="checkbox"/> Surface relief <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____				
<b>Comments:</b> <div style="height: 40px; border: 1px solid black;"></div>					

<b>Floodplain unit:</b>	<b>Low-Flow Channel</b>	<b>Active Floodplain</b>	<b>Low Terrace</b>		
<b>GPS point:</b> _____					
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____% Community successional stage: <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>					
<b>Indicators:</b> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </td> </tr> </table>				<input type="checkbox"/> Mudcracks <input type="checkbox"/> Ripples <input type="checkbox"/> Drift and/or debris <input type="checkbox"/> Presence of bed and bank <input type="checkbox"/> Benches	<input type="checkbox"/> Soil development <input type="checkbox"/> Surface relief <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____
<input type="checkbox"/> Mudcracks <input type="checkbox"/> Ripples <input type="checkbox"/> Drift and/or debris <input type="checkbox"/> Presence of bed and bank <input type="checkbox"/> Benches	<input type="checkbox"/> Soil development <input type="checkbox"/> Surface relief <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____				
<b>Comments:</b> <div style="height: 40px; border: 1px solid black;"></div>					

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 17-11		<b>Feature ID:</b> D12-11		<b>Date:</b> 9/5/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.84330, -120.04039		
<b>Potential anthropogenic influences on the channel system:</b> Vegetated ditch crosses under HWY 395 through culvert. 10 foot section of drainage closest to road appears excavated. Vegetated with upland species, dry at time of survey.					
<b>Brief site description:</b> Vegetated ditch runs under highway. Fence line present at ROW. Beyond ROW ditch runs into large perennial stream.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer         </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other: _____         </div> </div>					

### Wentworth Size Classes

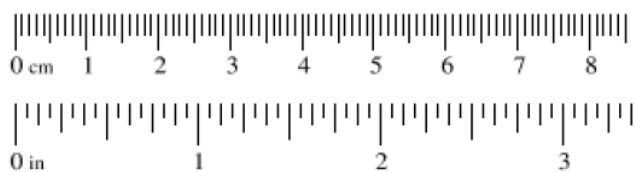
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud



Feature ID: D12-11

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:

- ☐ Change in average sediment texture  
☐ Change in vegetation species  
☐ Change in vegetation cover

- ☒ Break in bank slope  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

Comments:

Bed and bank feature with scoured channel. OHWM evidenced by gentle break in bank slope and destruction of terrestrial vegetation. Vegetation persists throughout ditch.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: Silty loamTotal veg cover: 80 % Tree: 0 % Shrub: 0 % Herb: 80 %

Community successional stage:

- ☐ NA ☐ Mid (herbaceous, shrubs, saplings)  
☒ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks ☐ Soil development  
☐ Ripples ☐ Surface relief  
☐ Drift and/or debris ☒ Other: Surface soil cracks  
☒ Presence of bed and bank ☐ Other: \_\_\_\_\_  
☐ Benches ☐ Other: \_\_\_\_\_

Comments:

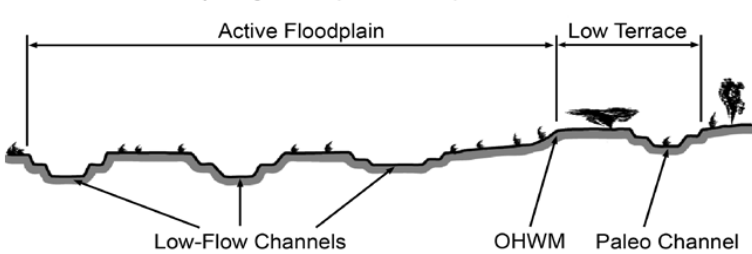
No water present in low-flow channel. There are surface soil cracks present within channel in area outside of excavation (about 10 feet from highway).



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA		<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)	
<input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks		<input type="checkbox"/> Soil development	
<input type="checkbox"/> Ripples		<input type="checkbox"/> Surface relief	
<input type="checkbox"/> Drift and/or debris		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Presence of bed and bank		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Benches		<input type="checkbox"/> Other: _____	
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA		<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)	
<input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks		<input type="checkbox"/> Soil development	
<input type="checkbox"/> Ripples		<input type="checkbox"/> Surface relief	
<input type="checkbox"/> Drift and/or debris		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Presence of bed and bank		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Benches		<input type="checkbox"/> Other: _____	
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 18-11		<b>Feature ID:</b> D13-11		<b>Date:</b> 9/5/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.84759, -120.04146		
<b>Potential anthropogenic influences on the channel system:</b> Vegetated ditch crosses under HWY 395 through culvert. Vegetated with upland herbaceous species, dry at time of survey.					
<b>Brief site description:</b> Vegetated ditch runs under highway. Fence line present at ROW. Beyond ROW ditch runs into large perennial stream.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer         </div> <div style="width: 45%;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:         </div> </div>					

### Wentworth Size Classes

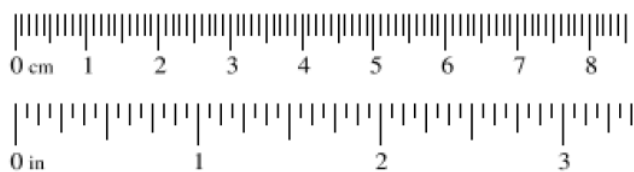
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud



Feature ID: D13-11

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☐ Change in average sediment texture☒ Change in vegetation species☐ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Bed and bank feature, scoured channel. OHWM evidenced by gentle break in slope and change in vegetation species. Sampling point documents a vegetated ditch.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: Silty loamTotal veg cover: 70 % Tree: 0 % Shrub: 0 % Herb: 70 %

Community successional stage:

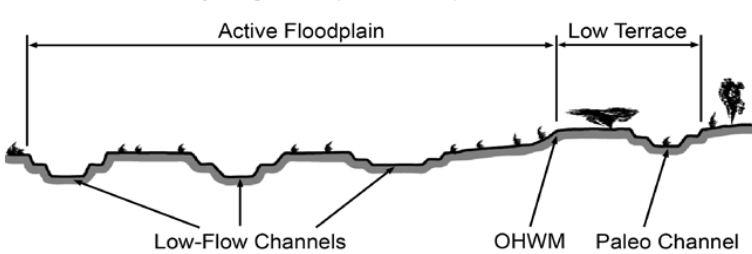
☐ NA☒ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☒ Mudcracks☐ Ripples☒ Drift and/or debris☒ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☒ Other: Surface soil cracks☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

No water present in low-flow channel. There are surface soil cracks present and drift/debris also present within channel.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 19-11		<b>Feature ID:</b> D14-11		<b>Date:</b> 9/5/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.86090. -120.04043		
<b>Potential anthropogenic influences on the channel system:</b> Drainage crosses under HWY 395 through large culvert. Appears to be an intermittent drainage that is dry at time of survey.					
<b>Brief site description:</b> Intermittent drainage runs under highway. Fence line present before ROW.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer         </div> <div style="width: 45%;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:         </div> </div>					

### Wentworth Size Classes

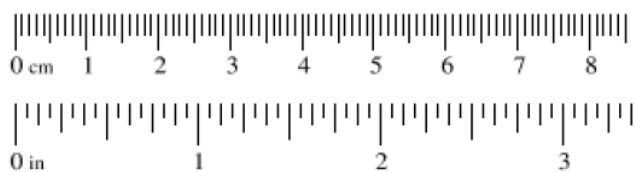
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud

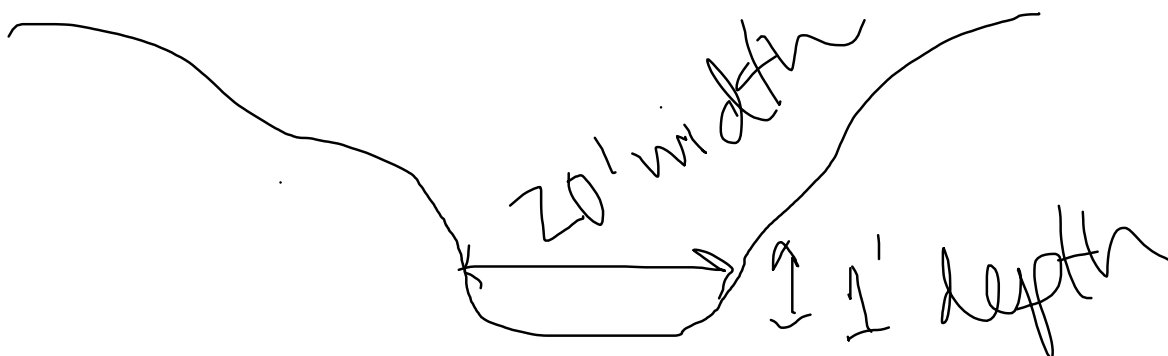


Feature ID: D14-11

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Defined bed and bank feature. OHWM evidenced by sharp break in bank slope, sediment change at OHWM and change in vegetation cover. Sampling point documents an intermittent stream.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: SandTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

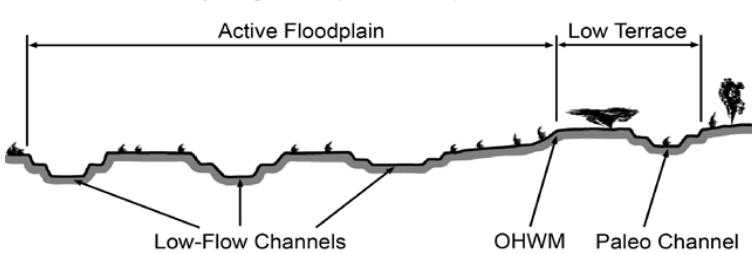
☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☒ Other: Sorting, sediment deposits☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 20-11		<b>Feature ID:</b> D15-11		<b>Date:</b> 9/5/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.85945, -120.04030		
<b>Potential anthropogenic influences on the channel system:</b> Drainage crosses under HWY 395 through a drain and a culvert. Appears to be an intermittent drainage that is dry at time of survey.					
<b>Brief site description:</b> Intermittent drainage runs under highway. Fence line present.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph <input type="checkbox"/> Digitized on computer		<input checked="" type="checkbox"/> GPS <input type="checkbox"/> Other:			

### Wentworth Size Classes

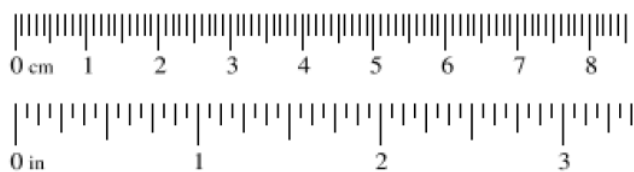
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud

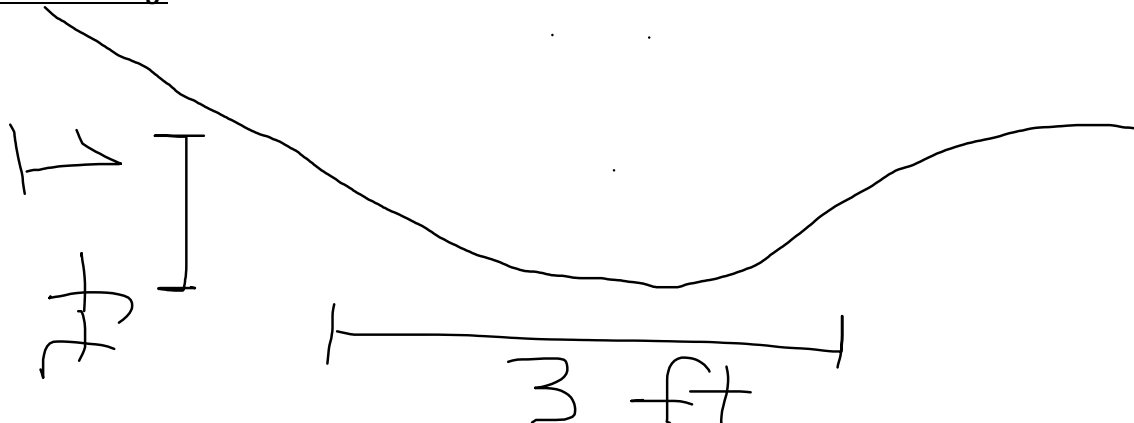


Feature ID: D15-11

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Bed an bank feature. OHWM evidenced by sharp break in bank slope, sediment change at OHWM and change in vegetation cover. Sampling point documents a non-vegetated ditch.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: SandTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

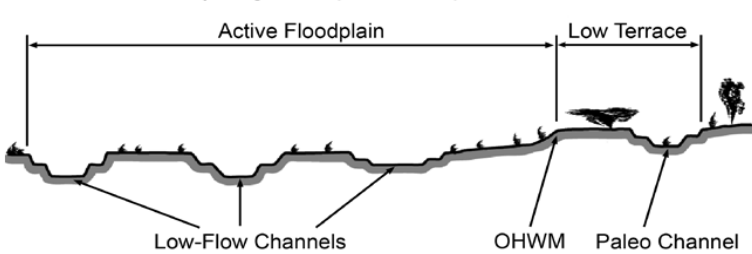
☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☒ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☒ Soil development☐ Surface relief☒ Other: Sediment deposits☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

No water present in low-flow channel. There are sediment deposits present within channel; channel has erosion present, exposing rock on bank sides. Sand and boulders present in low-flow channel.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 21-11		<b>Feature ID:</b> D16-11		<b>Date:</b> 9/5/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.86627, -120.03777			
<b>Potential anthropogenic influences on the channel system:</b> Drainage crosses under HWY 395 through a drain and a culvert. Appears to be an ephemeral drainage that is dry at time of survey.					
<b>Brief site description:</b> Ephemeral drainage runs under highway.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

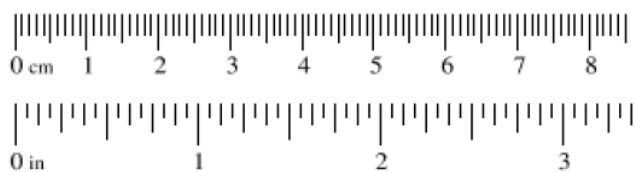
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud



Feature ID: D16-11

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Bed and bank feature with scoured channel. OHWM evidenced by moderate break in slope, sediment change at OHWM and change in vegetation cover. Sampling point documents an ephemeral stream.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: SandTotal veg cover: 5 % Tree: 0 % Shrub: 0 % Herb: 5 %

Community successional stage:

☐ NA☒ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☒ Mudcracks☒ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☒ Other: Sediment deposits☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

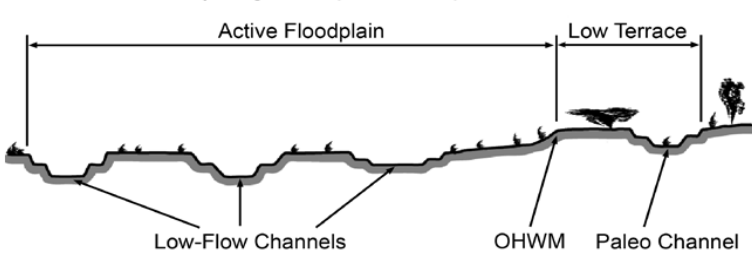
No water present in low-flow channel. There are sediment deposits present within channel; channel has soil cracks. Sand is predominantly present in low-flow channel.



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 22-11		<b>Feature ID:</b> D17-11		<b>Date:</b> 9/5/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> MO, KD					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Adjacent to US 395. <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.87180, -120.03339		
<b>Potential anthropogenic influences on the channel system:</b> Drainage crosses under HWY 395 through a large culvert. Appears to be an ephemeral drainage that is dry at time of survey.					
<b>Brief site description:</b> Intermittent drainage runs under highway.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud

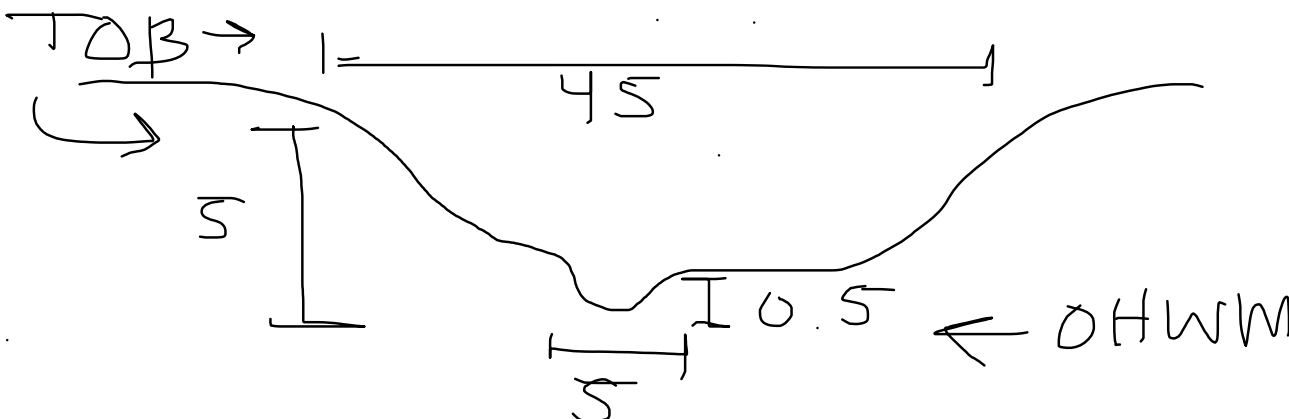


Feature ID: D17-11

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Defined bed and bank feature. OHWM evidenced by sharp break in bank slope, sediment change is at OHWM and change in vegetation cover. Sampling point documents an ephemeral stream.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: SandTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

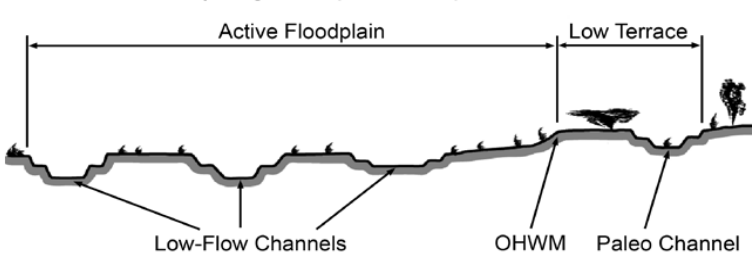
☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☒ Other: Sediment deposits☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

No water present in low-flow channel. There are sediment deposits present within channel; channel has erosion present, exposing rock on bank sides. Sand and boulders present in low-flow channel.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# **Arid West Ephemeral and Intermittent Streams OHWM Datasheet**

<b>Sampling Point:</b> SP 100-11		<b>Feature ID:</b> D100-11		<b>Date:</b> 9/5/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> SF/PF					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Along Highway 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.88273, -120.02454		
<b>Potential anthropogenic influences on the channel system:</b> Roadway (hwy 395), burned area to the east					
<b>Brief site description:</b> Small, sandy ephemeral stream flowing through C100-11, TOB same as OHWM (see below)					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer         </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other: _____         </div> </div>					

### Wentworth Size Classes

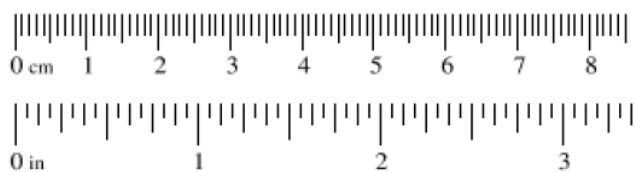
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud

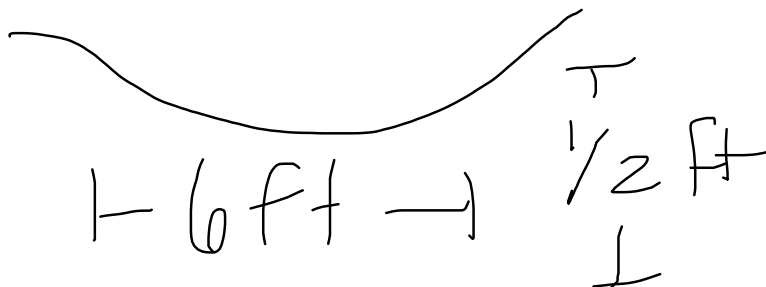


Feature ID: D100-11

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Defined bed and bank feature. Three OHWM indicators observed: change in vegetation cover, change in sediment texture and break in bank slope. Sampling point documents an ephemeral stream.

Floodplain unit:☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: sand, pebblesTotal veg cover: 5 % Tree: 0 % Shrub: 0 % Herb: 5 %

Community successional stage:

☐ NA☒ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☐ Soil development☒ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 101-11		<b>Feature ID:</b> D101-11		<b>Date:</b> 9/5/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> SF/PF					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Along Highway 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.88276, -120.02450		
<b>Potential anthropogenic influences on the channel system:</b> Roadway (Hwy 395).					
<b>Brief site description:</b> Unvegetated roadside ditch flowing into D100-11, TOB same as OHWM.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph			<input checked="" type="checkbox"/> GPS		
<input type="checkbox"/> Digitized on computer			<input type="checkbox"/> Other:		

### Wentworth Size Classes

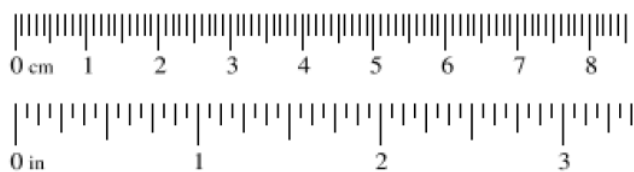
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud

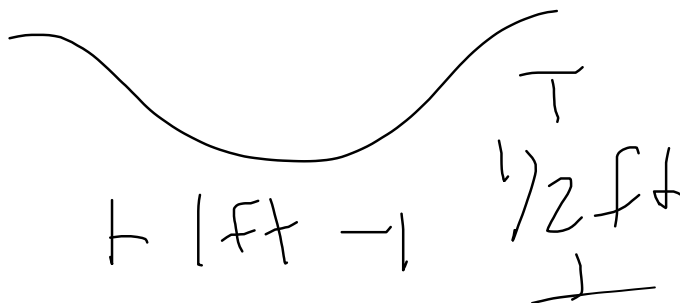


Feature ID: D101-11

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Three OHWM indicators observed: change in vegetation cover, change in sediment texture and break in bank slope. Sampling point documents an unvegetated roadside ditch.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: silty clayTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

☒ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☐ Soil development☒ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 102-11		<b>Feature ID:</b> D102-11		<b>Date:</b> 9/6/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> SF/PF					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Along Highway 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.87044, -120.03465		
<b>Potential anthropogenic influences on the channel system:</b> Roadway (hwy 395), rangeland					
<b>Brief site description:</b> Ephemeral stream with eroded banks, flowing through C102-11 and C104-11, TOB wider than OHWM in upper reach becomes the same in lower reach, excavated/veg removed near C104-11.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph			<input checked="" type="checkbox"/> GPS		
<input type="checkbox"/> Digitized on computer			<input type="checkbox"/> Other:		

### Wentworth Size Classes

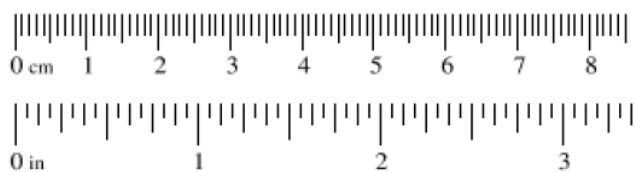
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud

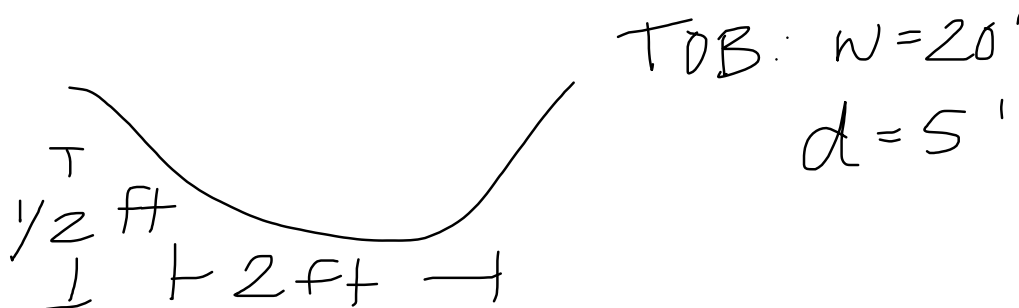


Feature ID: D102-11

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Bed and bank feature with scoured channel. Three OHWM indicators observed: change in vegetation cover, change in sediment texture and break in bank slope. Sampling point documents an ephemeral stream.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: coarse silt, cobbles, and pebblesTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

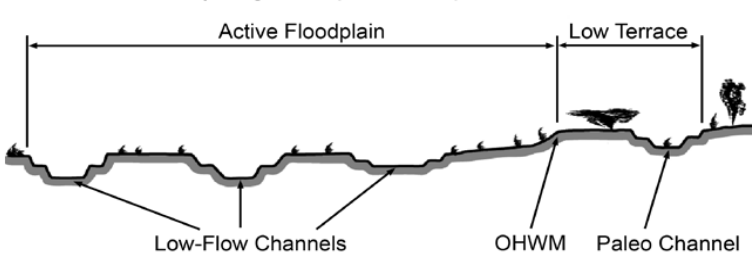
☒ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☐ Soil development☒ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA		<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)	
<input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks		<input type="checkbox"/> Soil development	
<input type="checkbox"/> Ripples		<input type="checkbox"/> Surface relief	
<input type="checkbox"/> Drift and/or debris		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Presence of bed and bank		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Benches		<input type="checkbox"/> Other: _____	
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA		<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)	
<input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks		<input type="checkbox"/> Soil development	
<input type="checkbox"/> Ripples		<input type="checkbox"/> Surface relief	
<input type="checkbox"/> Drift and/or debris		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Presence of bed and bank		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Benches		<input type="checkbox"/> Other: _____	
<b>Comments:</b>			

# **Arid West Ephemeral and Intermittent Streams OHWM Datasheet**

<b>Sampling Point:</b> SP 103-11		<b>Feature ID:</b> D103-11		<b>Date:</b> 9/6/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> SF/PF					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Along Highway 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.87033, -120.03494		
<b>Potential anthropogenic influences on the channel system:</b> Roadway adjacent to Hwy 395.					
<b>Brief site description:</b> Small ephemeral stream flowing through C103-11 into D102-11, excavated/vegetation removed throughout, boulders to the east near connection to D102-11.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer         </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other: _____         </div> </div>					

### Wentworth Size Classes

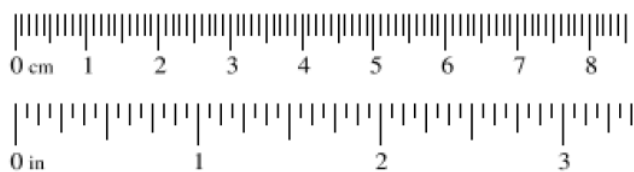
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud

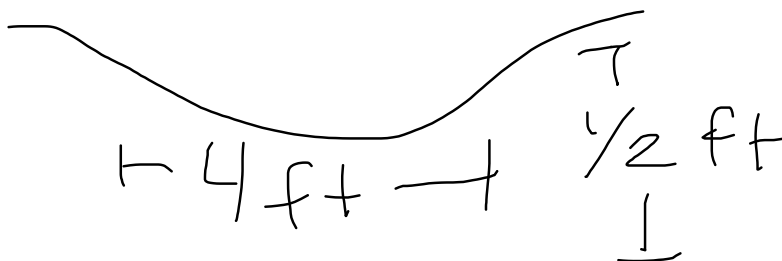


Feature ID: D103-11

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: SP 103-11

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Bed and bank feature with scoured channel. Three OHWM indicators observed: change in vegetation cover, change in sediment texture and break in bank slope. Sampling point documents an ephemeral stream.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:

Average sediment texture: sand, silt

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

☒ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☐ Soil development☒ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 104-11		<b>Feature ID:</b> D104,105,106-11		<b>Date:</b> 9/6/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County, CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> SF/PF					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Along Highway 395 <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.86898, -120.03564		
<b>Potential anthropogenic influences on the channel system:</b> Rangeland adjacent to Hwy. 395					
<b>Brief site description:</b> Small ephemeral channels running off hillside into D102-11, delineated to 10' fenceline, TOB same as OHWM, cross apply D104-11 with D105-11 and D106-11.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph			<input checked="" type="checkbox"/> GPS		
<input type="checkbox"/> Digitized on computer			<input type="checkbox"/> Other:		

### Wentworth Size Classes

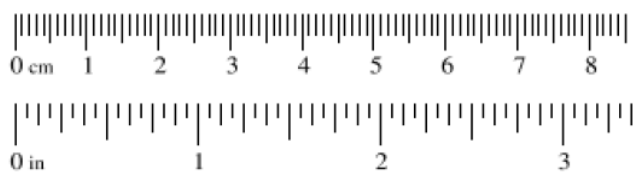
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud

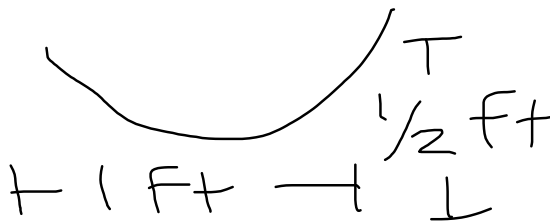


Feature ID: D104, D105, D Cross section ID:

Date:

Time:

Cross section drawing:



OHWM

GPS point: SP 104-11

**Indicators:**

☒ Change in average sediment texture

☐ Change in vegetation species

☒ Change in vegetation cover

☒ Break in bank slope

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

**Comments:**

bed and bank feature with scoured channel. Three OHWM indicators observed: change in vegetation cover, change in sediment texture and break in bank slope. Sampling point documents an ephemeral stream. Data from D104-11 is consisted with feature ids D105-11 and D106-11.

Floodplain unit:

☒ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

☒ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

**Indicators:**

☒ Mudcracks

☐ Ripples

☐ Drift and/or debris

☒ Presence of bed and bank

☐ Benches

☐ Soil development

☒ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

**Comments:**



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# **WETLAND DETERMINATION DATA FORM -Arid West Region**

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #11 City/County: Lassen County Sampling Date: 9/4/2019

Applicant/Owner: Zayo Group State: California Sampling Point: SP 04-11 Feature ID: W01-11

Investigator(s): MO, KD Section, Township, Range: S20, T25N, R17E

Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRRN) D Lat: 39.92164 Long: -120.01854 Datum: NAD83

Soil Map Unit Name: (289) Mottsville gravelly loam, 2 to 9 percent slopes NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## **SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes x No     

Hydric Soil Present? Yes x No     

Wetland Hydrology Present? Yes x No     

Is the Sampled Area within a Wetland? Yes x No     

## **Evaluation of features designated "Other Waters"**

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

**Remarks:** Wetland parameters are present as indicated by both primary and secondary hydrology indicators including saturation and a high water table, hydric soils (depleted matrix and the presence of hydrogen sulfide), and a dominance of hydrophytic vegetation.

## **VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
-------------	--------------	------------------	-------------------	------------------

Tree Stratum (Plot size:     )

1	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>

0 = Total Cover

Sapling/Shrub Stratum (Plot size:     )

1	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
5	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>

0 = Total Cover

Herb Stratum (Plot size: 5' radius)

1	<u>Schacu</u>	<u>Schoenoplectus acutus</u>	<u>50</u>	<u>YES</u>	<u>OBL</u>
2	<u>Typlat</u>	<u>Typha latifolia</u>	<u>25</u>	<u>YES</u>	<u>OBL</u>
3	<u>Carneb</u>	<u>Carex nebrascensis</u>	<u>20</u>	<u>YES</u>	<u>OBL</u>
4	<u>Epicil</u>	<u>Epilobium ciliatum</u>	<u>3</u>	<u>NO</u>	<u>FACW</u>
5	<u>Nepcat</u>	<u>Nepeta cataria</u>	<u>2</u>	<u>NO</u>	<u>FACU</u>
6	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
7	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
8	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
9	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
10	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
11	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>

100 = Total Cover

Woody Vine Stratum (Plot size:     )

1	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>

0 = Total Cover

% Bare Ground in Herb 0 % Cover of Biotic     

## **Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

## **Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species	95	x 1 = 95
FACW species	3	x 2 = 6
FAC species	0	x 3 = 0
FACU species	2	x 4 = 8
UPL species	0	x 5 = 0
Column Totals:	100 (A)	109 (B)
Prevalence Index = B/A =		1.09

## **Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation  
 Yes 2 - Dominance Test is >50%  
 Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## **Hydrophytic Vegetation Present?**

Yes X No     

**Remarks:** Hydrophytic vegetation indicator present as evidenced by a dominance of OBL species.

SOIL							Sampling Point: SP 04-11	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 3/2	100					Sandy clay loam	
4-14	10 YR 4/1	70					Loamy sand	
	2.5 Y 3/1	30						
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input checked="" type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Vernal Pools (F9) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)					
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b>					<b>Hydric Soil Present?</b>			
Type: _____ None Depth (inches): _____ NA					Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
<b>Remarks:</b> Soil sample is hydric as evidenced by a hydrogen sulfide odor starting at a depth less than 12 inches from the soil surface.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>			
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Salt Crust (B11) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Biotic Crust (B12) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Other (Explain in Remarks)					<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ NA Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ 2 Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ 0 (includes capillary fringe)					Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Primary hydrology indicator present as evidenced by saturation present throughout the soil pit and a high water table at 2 inches below the surface. Secondary indicators are also present (saturation visible on aerial and dominant species pass FAC-neutral test).								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #10 City/County: Lassen County Sampling Date: 9/4/2019

Applicant/Owner: Zayo Group State: California Sampling Point: SP 05-11 Feature ID: U01-11

Investigator(s): MO, KD Section, Township, Range: S20, T25N, R17E

Local relief (hillside, terrace, etc.): Terrace Local Relief (concave, convex, none): None Slope (%): 1

Subregion (LRR): D Lat: 39.92163 Long: -120.01856 Datum: NAD83

Soil Map Unit Name: (289) Mottsville gravelly loam, 2 to 9 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland?	Yes	No	x
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>				
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>				

## Evaluation of features designated "Other Waters"

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

Remarks: Sample confirms as upland on slight slope where indicators of all three parameters are absent; upland pair point to W01-11.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: <u>    </u> )				
1				
2				
3				
4				
		0	= Total Cover	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15' radius</u> )				
1	Artrri	20	YES	UPL
2				
3				
4				
5				
		20	= Total Cover	
<b>Herb Stratum</b> (Plot size: <u>5' radius</u> )				
1	Melalb	25	YES	UPL
2	Brotec	15	YES	UPL
3	Grisqu	10	NO	FACU
4	Acrep	5	NO	UPL
5				
6				
7				
8				
9				
10				
11				
		55	= Total Cover	
<b>Woody Vine Stratum</b> (Plot size: <u>    </u> )				
1				
2				
		0	= Total Cover	
% Bare Ground in Herb <u>45</u>		% Cover of Biotic <u>    </u>		

## Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant  
Species Across All Strata: 3 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	10	x 4 = 40
UPL species	65	x 5 = 325
Column Totals:	75	(A)
Prevalence Index = B/A		365 (B)
		4.8667

## Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

No 3 - Prevalence Index is ≤3.0<sup>1</sup>

4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

5 - Wetland Non-Vascular Plants<sup>1</sup>

6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## Hydrophytic Vegetation Present?

Yes      No X

Remarks: Sample point dominated by mostly UPL vegetation.

SOIL							Sampling Point: SP 05-11	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	2.5 Y 4/4	100					Sandy loam	Roadfill throughout
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.								
<sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)						<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)							
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)							
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)							
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )	<input type="checkbox"/> Depleted Matrix (F3)							
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )	<input type="checkbox"/> Redox Dark Surface (F6)							
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)						<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b>							<b>Hydric Soil Present?</b>	
Type: Shovel refusal/rocky road bed							Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Depth (inches): 5								
<b>Remarks:</b> Soil pit lacks hydric soil indicators above restrictive layer (road bed).								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)					<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)					<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)					<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)					<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)					<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)					<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)					<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)					<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)					<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text" value="NA"/>		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text" value="NA"/>				
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text" value="NA"/>				
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Lassen County Sampling Date: 9/5/2019

Applicant/Owner: Zayo Group State: California Sampling Point: SP 08-11 Feature ID: W03-11

Investigator(s): MO/ KD Section, Township, Range: S34, T24, R18E

Local relief (hillside, terrace, etc.): Terrace Local Relief (concave, convex, none): Concave Slope (%): 4

Subregion (LRRN) D Lat: 39.90817 Long: -120.01221 Datum: NAD83

Soil Map Unit Name: 203 Fluvents-Riverwash complex, 0 to 1 percent slopes NWI classification: R3USC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No     

Hydric Soil Present? Yes x No     

Wetland Hydrology Present? Yes x No     

Is the Sampled Area within a Wetland? Yes x No     

## Evaluation of features designated "Other Waters"

Characteristics: Type:      Width:      Substrate:     

Indicators: Defined bed and bank:      Scour      OHWM Mapped     

Feature Designation: Perennial      Intermittent      Ephemeral     

Natural Drainage      Artificial Drainage      Navigable Water     

Remarks: Wetland parameters are present as indicated by hydrology indicator saturation, hydric soils (depleted matrix), and a dominance of hydrophytic vegetation.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u> = Total Cover		

Sapling/Shrub Stratum (Plot size: <u>15' radius</u> )				
1 <u>Salexi</u>	<u>Salix exigua</u>	<u>15</u>	<u>YES</u>	<u>FACW</u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
5 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>15</u> = Total Cover		

Herb Stratum (Plot size: <u>5' radius</u> )				
1 <u>Poapra</u>	<u>Poa pratensis</u>	<u>20</u>	<u>YES</u>	<u>FAC</u>
2 <u>Leplat</u>	<u>Lepidium latifolium</u>	<u>20</u>	<u>YES</u>	<u>FAC</u>
3 <u>Rumcri</u>	<u>Rumex crispus</u>	<u>5</u>	<u>NO</u>	<u>FAC</u>
4 <u>Polmon</u>	<u>Polypogon monspeliensis</u>	<u>25</u>	<u>YES</u>	<u>FACW</u>
5 <u>Junbal</u>	<u>Juncus balticus</u>	<u>20</u>	<u>YES</u>	<u>FACW</u>
6 <u>Equlae</u>	<u>Equisetum laevigatum</u>	<u>5</u>	<u>NO</u>	<u>FACW</u>
7 <u>Epicil</u>	<u>Epilobium ciliatum</u>	<u>5</u>	<u>NO</u>	<u>FACW</u>
8 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
9 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
10 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
11 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>100</u> = Total Cover		

Woody Vine Stratum (Plot size: <u>    </u> )				
1 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u> = Total Cover		

% Bare Ground in Herb 0 % Cover of Biotic     

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>70</u>	x 2 =	<u>140</u>
FAC species <u>45</u>	x 3 =	<u>135</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>115</u> (A)		<u>275</u> (B)
Prevalence Index = B/A =		<u>2.3913</u>

## Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
  - Yes 2 - Dominance Test is >50%
  - Yes 3 - Prevalence Index is  $\leq 3.0^1$
  - 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
  - 5 - Wetland Non-Vascular Plants<sup>1</sup>
  - 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## Hydrophytic Vegetation Present?

Yes X No     

Remarks: Hydrophytic vegetation indicator present as evidenced by a dominance of FACW and FAC species.

SOIL							Sampling Point: SP 08-11	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	7.5 YR 5/2	100					Loamy sand	
3-5	7.5 YR 4/2	100					Sand	
5-14	7.5 YR 4/1	90	7.5 YR 2.5/1	10	D	M	Sandy clay	Distinct redox; Manganese concretions
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b>					<b>Hydric Soil Present?</b>			
Type: _____ None Depth (inches): _____ NA					Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
<b>Remarks:</b> Hydric soil indicator F3 Depleted Matrix met by at least 6 inches thick starting in the top 10 inches of soil surface, with redox concentrations (including soft iron-manganese masses), in a matrix with a value of 4 or more and chroma of 2 or less.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>			
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)					<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)			
					<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ NA Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ NA Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ 0 (includes capillary fringe)					Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicator present as evidenced by saturation. The sample pit lacks high water table but the soil pit is adjacent to the stream and therefore receives groundwater saturation from the nearby stream. Also, passes the secondary indicator of FAC-neutral test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project City/County: Lassen County Sampling Date: 9/5/2019

Applicant/Owner: Zayo Group State: California Sampling Point: SP 09-11 Feature ID: U03-11

Investigator(s): MO, KD Section, Township, Range: S34, T24, R18E

Local relief (hillside, terrace, etc.): Terrace Local Relief (concave, convex, none): None Slope (%): 0

Subregion (LRR): D Lat: 39.90809 Long: -120.01217 Datum: NAD83

Soil Map Unit Name: 203 Fluvents-Riverwash complex, 0 to 1 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x  
Hydric Soil Present? Yes      No x  
Wetland Hydrology Present? Yes      No x

Is the Sampled Area within a Wetland? Yes      No x

## Evaluation of features designated "Other Waters"

Characteristics: Type:      Width:      Substrate:       
Indicators: Defined bed and bank:      Scour      OHWM Mapped       
Feature Designation: Perennial      Intermittent      Ephemeral       
Natural Drainage      Artificial Drainage      Navigable Water     

Remarks: Sample confirmed as upland where indicators of all three parameters are absent; upland pair point to W03-11.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum	(Plot size: <u>    </u> )			
1	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum	(Plot size: <u>15' radius</u> )			
1	Arttri <u>Artemisia tridentata</u>	40	YES	UPL
2	Salexi <u>Salix exigua</u>	20	YES	FACW
3	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
5	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>60</u>	= Total Cover	

Herb Stratum	(Plot size: <u>5' radius</u> )			
1	Sisalt <u>Sisymbrium altissimum</u>	20	YES	FACU
2	Brotec <u>Bromus tectorum</u>	35	YES	UPL
3	Leplat <u>Lepidium latifolium</u>	15	NO	FAC
4	Lacser <u>Lactuca serriola</u>	10	NO	FACU
5	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
6	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
7	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
8	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
9	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
10	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
11	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>80</u>	= Total Cover	

Woody Vine Stratum	(Plot size: <u>    </u> )			
1	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u>	= Total Cover	

% Bare Ground in Herb 20 % Cover of Biotic     

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.25 (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>20</u>	x 2 = <u>40</u>
FAC species <u>15</u>	x 3 = <u>45</u>
FACU species <u>30</u>	x 4 = <u>120</u>
UPL species <u>75</u>	x 5 = <u>375</u>
Column Totals: <u>140</u> (A)	<u>580</u> (B)
Prevalence Index = B/A = <u>4.1429</u>	

## Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
  - No 2 - Dominance Test is >50%
  - No 3 - Prevalence Index is  $\leq 3.0$ <sup>1</sup>
  - 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
  - 5 - Wetland Non-Vascular Plants<sup>1</sup>
  - 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## Hydrophytic Vegetation Present?

Yes      No X

Remarks: Sample point predominantly dominated by UPL and FACU vegetation.



SOIL							Sampling Point:		SP 09-11	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Matrix		Redox Features				Texture	Remarks		
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>				
0-10	7.5 YR 4/3	100					Sand	No redox		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.				
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)										
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/>		Sandy Redox (S5)		Indicators for Problematic Hydric Soils <sup>3</sup> :					
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/>		Stripped Matrix (S6)		<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )					
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/>		Loamy Mucky Mineral (F1)		<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )					
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/>		Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Reduced Vertic (F18)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )	<input type="checkbox"/>		Depleted Matrix (F3)		<input type="checkbox"/> Red Parent Material (TF2)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )	<input type="checkbox"/>		Redox Dark Surface (F6)		<input type="checkbox"/> Other (Explain in Remarks)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/>		Depleted Dark Surface (F7)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/>		Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/>		Vernal Pools (F9)							
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/>									
Restrictive Layer (if present):					Hydric Soil Present?					
Type: _____ Road prism _____					Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X <input type="checkbox"/>					
Depth (inches): _____ 10 _____										
Remarks: Hydric soil indicators not observed above restrictive layer.										
HYDROLOGY										
Wetland Hydrology Indicators:					Secondary Indicators (2 or more required)					
Primary Indicators (minimum of one required; check all that apply)										
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/>		Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )					
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/>		Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )					
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/>		Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )					
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/>		Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)					
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/>		Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)					
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/>		Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)					
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/>		Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (CS)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>		Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)					
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/>		Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)					
Field Observations:					Wetland Hydrology Present?					
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X <input type="checkbox"/>			Depth (inches):	_____ NA _____	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X <input type="checkbox"/>					
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X <input type="checkbox"/>			Depth (inches):	_____ NA _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X <input type="checkbox"/> (includes capillary fringe)			Depth (inches):	_____ NA _____						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:										
Remarks: Hydrology indicators not observed.										

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.110918

Project/Site: Zayo Fiberoptic Interconnect Project, Group #11 City/County: Lassen County Sampling Date: 9/5/2019  
 Applicant/Owner: Zayo Group State: California Sampling Point: SP 07-11 Feature ID: NW01-11  
 Investigator(s): MO, KD Section, Township, Range: S13, T24N, R17E  
 Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 39.93826 Long: -120.02059 Datum: NAD83  
 Soil Map Unit Name: (363) Smocreek silty clay loam, 0 to 2 percent slopes NWI classification: PEM1C  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation YES, Soil YES, or Hydrology YES significantly disturbed?      Are "Normal Circumstances" present? Yes      No x  
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## **SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <u>x</u>	No <u>    </u>	Is the Sampled Area within a Wetland?	Yes	No	<u>x</u>
Hydric Soil Present?	Yes <u>    </u>	No <u>x</u>				
Wetland Hydrology Present?	Yes <u>    </u>	No <u>x</u>				

## **Evaluation of features designated "Other Waters"**

Characteristics: Type:      Width:      Substrate:       
 Indicators: Defined bed and bank:      Scour      OHWM Mapped       
 Feature Designation: Perennial      Intermittent      Ephemeral       
 Natural Drainage      Artificial Drainage      Navigable Water     

**Remarks:** The area was recently burned so vegetation is lacking and grasses are difficult to identify, however, the area still has a dominance of hydrophytic vegetation. The soils reveal homogeneous light brown soil with no redox features, and therefore there are no indicators of hydric soil. No hydrology indicators observed at time of survey. Therefore, this area lacks two of the three wetland

## **VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER**

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: 30' radius )	% Cover	Species?	Status
1				
2				
3				
4				
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: 15' radius )			
1 Salexi	Salix exigua	15	YES	FACW
2				
3				
4				
5				
		15	= Total Cover	
Herb Stratum	(Plot size: 5' radius )			
1 Atrgar	Atriplex gardneri	20	YES	UPL
2 Elyrep	Elymus repens	15	YES	FAC
3				
4				
5				
6				
7				
8				
9				
10				
11				
		35	= Total Cover	
Woody Vine Stratum	(Plot size: )			
1				
2				
		0	= Total Cover	

% Bare Ground in Herb 65 % Cover of Biotic     

## **Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.6667 (A/B)

## **Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species	<u>0</u> x 1 = <u>0</u>
FACW species	<u>15</u> x 2 = <u>30</u>
FAC species	<u>15</u> x 3 = <u>45</u>
FACU species	<u>0</u> x 4 = <u>0</u>
UPL species	<u>20</u> x 5 = <u>100</u>
Column Totals:	<u>50</u> (A) <u>175</u> (B)
Prevalence Index = B/A = <u>3.5</u>	

## **Hydrophytic Vegetation Indicators:**

- 1 - Rapid Test for Hydrophytic Vegetation
  - Yes 2 - Dominance Test is >50%
  - No 3 - Prevalence Index is ≤3.0<sup>1</sup>
  - 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
  - 5 - Wetland Non-Vascular Plants<sup>1</sup>
  - 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

## **Hydrophytic Vegetation Present?**

Yes X No     

**Remarks:** Vegetation is largely disturbed due to fire; identifiable vegetation contains a dominance of FACW, FAC species.

SOIL							Sampling Point: SP 07-11	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-10	10 YR 3/2	100					Silty clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>				
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )				
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )				
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Reduced Vertic (F18)				
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Red Parent Material (TF2)				
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)				<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
<b>Restrictive Layer (if present):</b>				<b>Hydric Soil Present?</b>				
Type: <input type="checkbox"/> Shovel refusal				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Depth (inches): <input type="checkbox"/> 10								
<b>Remarks:</b> No hydric soil indicators present.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>				
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )				
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )				
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )				
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)				
<b>Field Observations:</b>				<b>Wetland Hydrology Present?</b>				
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="checkbox"/>					
Saturation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <input type="checkbox"/>					
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 01-12		<b>Feature ID:</b> D01-12		<b>Date:</b> 9/4/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> SF PF					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Lassen County <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.77617, 120.04173		
<b>Potential anthropogenic influences on the channel system:</b> Roadway, agriculture					
<b>Brief site description:</b> Ephemeral stream, top of bank and OHWM are the same, 2 associated culverts (C01-12- and C02-12). D02-12 is tributary to D01-12. D01-12 crosses County Road 70 via C01-12.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS Imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph			<input checked="" type="checkbox"/> GPS		
<input type="checkbox"/> Digitized on computer			<input type="checkbox"/> Other:		

### Wentworth Size Classes

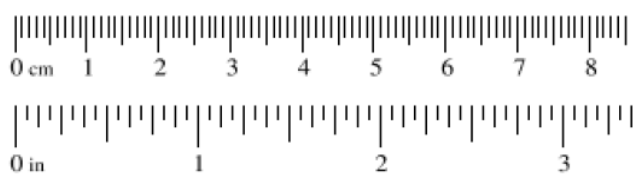
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud



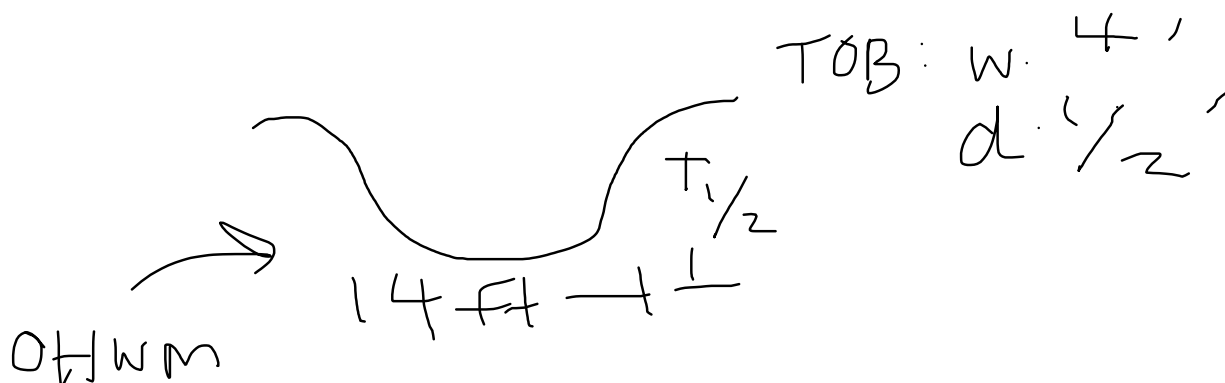
Feature ID:

Cross section ID:

Date:

Time:

Cross section drawing:



OHWM

GPS point: \_\_\_\_\_

Indicators:

☒ Change in average sediment texture

☐ Change in vegetation species

☒ Change in vegetation cover

☒ Break in bank slope

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

Comments:

Three OHWM indicators observed: change in avg sediment texture, change in veg cover and break in bank slope

Floodplain unit:

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

Indicators:

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☐ Presence of bed and bank

☐ Benches

☐ Soil development

☐ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

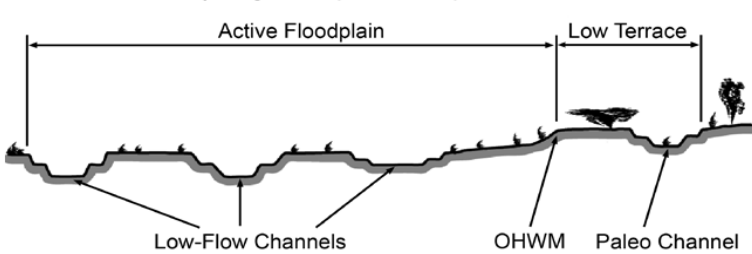
☐ Other: \_\_\_\_\_

Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 02-12		<b>Feature ID:</b> D02-12		<b>Date:</b> 9/4/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> SF PF					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Lassen County <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.77619, -120.04015		
<b>Potential anthropogenic influences on the channel system:</b> Roadway, agriculture					
<b>Brief site description:</b> Ephemeral stream, top of bank and OHWM are the same, confluence with D01-12					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS Imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div style="text-align: center;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					



### Wentworth Size Classes

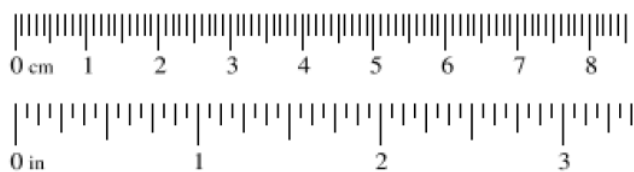
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
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0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud



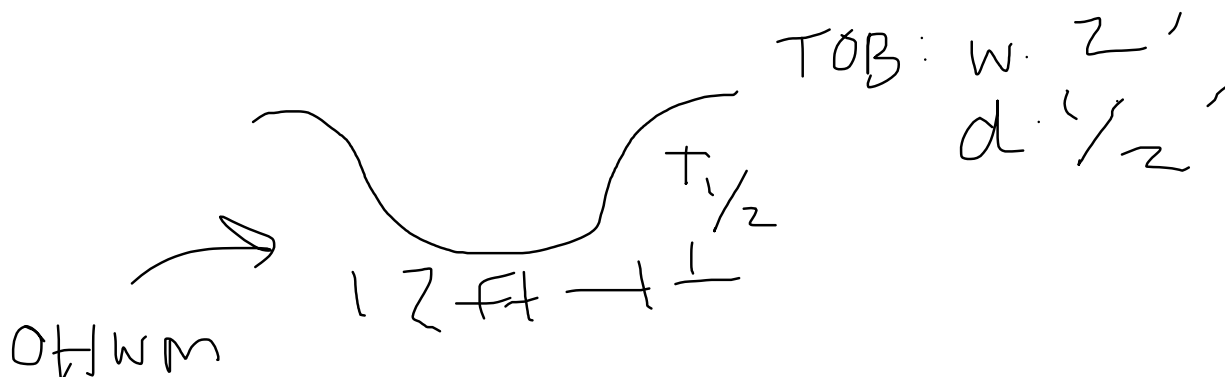
Feature ID:

Cross section ID:

Date:

Time:

Cross section drawing:



OHWM

GPS point: \_\_\_\_\_

Indicators:

☒ Change in average sediment texture

☐ Change in vegetation species

☒ Change in vegetation cover

☒ Break in bank slope

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

Comments:

Three OHWM indicators observed: change in avg sediment texture, change in veg cover and break in bank slope

Floodplain unit:

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

Indicators:

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☐ Presence of bed and bank

☐ Benches

☐ Soil development

☐ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

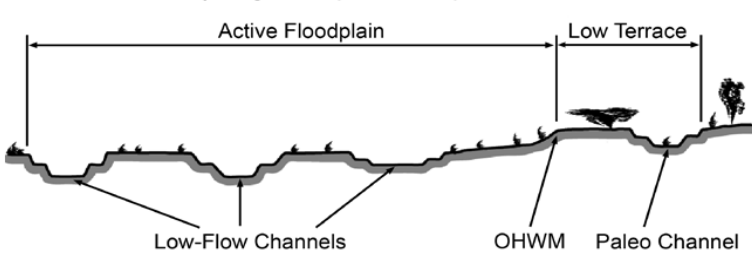
☐ Other: \_\_\_\_\_

Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>		
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace					
<b>GPS point:</b> _____					
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____% Community successional stage: <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>					
<b>Indicators:</b> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </td> </tr> </table>				<input type="checkbox"/> Mudcracks <input type="checkbox"/> Ripples <input type="checkbox"/> Drift and/or debris <input type="checkbox"/> Presence of bed and bank <input type="checkbox"/> Benches	<input type="checkbox"/> Soil development <input type="checkbox"/> Surface relief <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____
<input type="checkbox"/> Mudcracks <input type="checkbox"/> Ripples <input type="checkbox"/> Drift and/or debris <input type="checkbox"/> Presence of bed and bank <input type="checkbox"/> Benches	<input type="checkbox"/> Soil development <input type="checkbox"/> Surface relief <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____				
<b>Comments:</b> <div style="height: 40px; border: 1px solid black;"></div>					

<b>Floodplain unit:</b>	<b>Low-Flow Channel</b>	<b>Active Floodplain</b>	<b>Low Terrace</b>		
<b>GPS point:</b> _____					
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____% Community successional stage: <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>					
<b>Indicators:</b> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </td> </tr> </table>				<input type="checkbox"/> Mudcracks <input type="checkbox"/> Ripples <input type="checkbox"/> Drift and/or debris <input type="checkbox"/> Presence of bed and bank <input type="checkbox"/> Benches	<input type="checkbox"/> Soil development <input type="checkbox"/> Surface relief <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____
<input type="checkbox"/> Mudcracks <input type="checkbox"/> Ripples <input type="checkbox"/> Drift and/or debris <input type="checkbox"/> Presence of bed and bank <input type="checkbox"/> Benches	<input type="checkbox"/> Soil development <input type="checkbox"/> Surface relief <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____				
<b>Comments:</b> <div style="height: 40px; border: 1px solid black;"></div>					

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 03-12		<b>Feature ID:</b> D03-12		<b>Date:</b> 9/4/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> SF PF					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Lassen County <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.77599, -120.04136		
<b>Potential anthropogenic influences on the channel system:</b> Roadway, agriculture					
<b>Brief site description:</b> Unvegetated roadside ditch, top of bank and OHWM are the same. Not associated with any down stream mapped drainage features. Ditch originates and ends in roadside.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS Imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

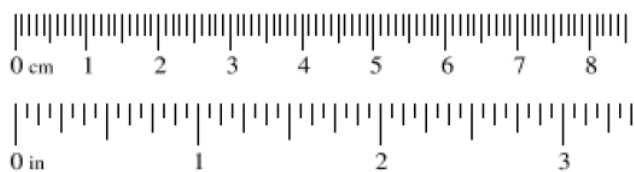
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud



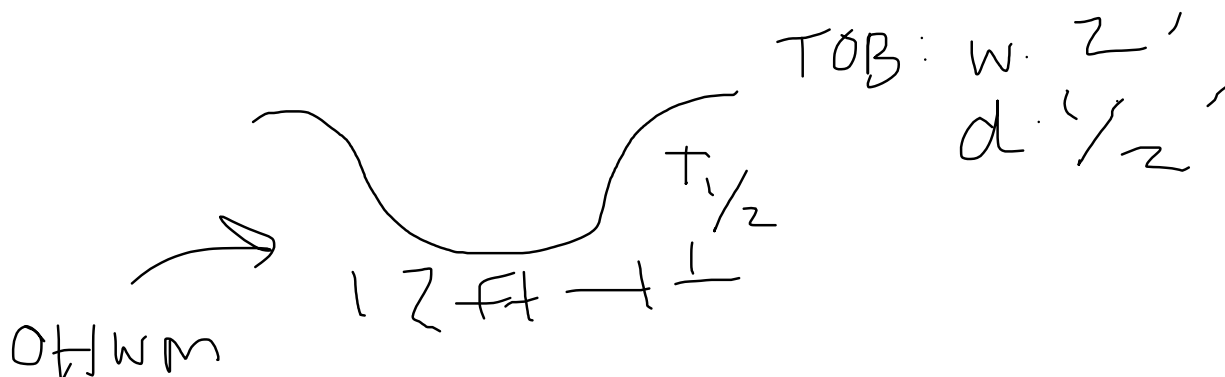
Feature ID:

Cross section ID:

Date:

Time:

Cross section drawing:



OHWM

GPS point: \_\_\_\_\_

Indicators:

☒ Change in average sediment texture

☐ Change in vegetation species

☒ Change in vegetation cover

☒ Break in bank slope

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

Comments:

Three OHWM indicators observed: change in avg sediment texture, change in veg cover and break in bank slope

Floodplain unit:

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

Indicators:

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☐ Presence of bed and bank

☐ Benches

☐ Soil development

☐ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

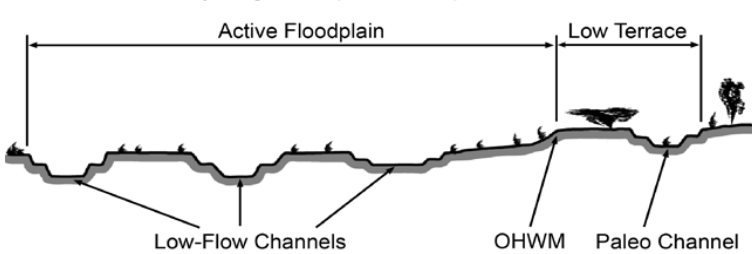
☐ Other: \_\_\_\_\_

Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 04-12		<b>Feature ID:</b> D04-12A&B		<b>Date:</b> 9/4/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> SF PF					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Lassen County <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.76824, -120.03970		
<b>Potential anthropogenic influences on the channel system:</b> Roadway, agriculture					
<b>Brief site description:</b> Ephemeral stream. A&B top of bank and OHWM are the same, B is a tributary of A. C05-12 associated with B.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS Imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer         </div> <div style="width: 45%;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other: _____         </div> </div>					



### Wentworth Size Classes

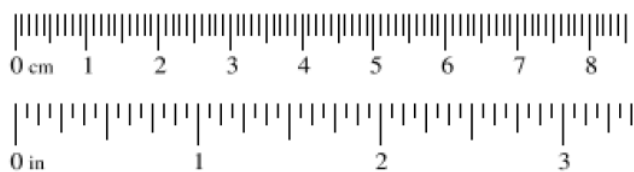
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud



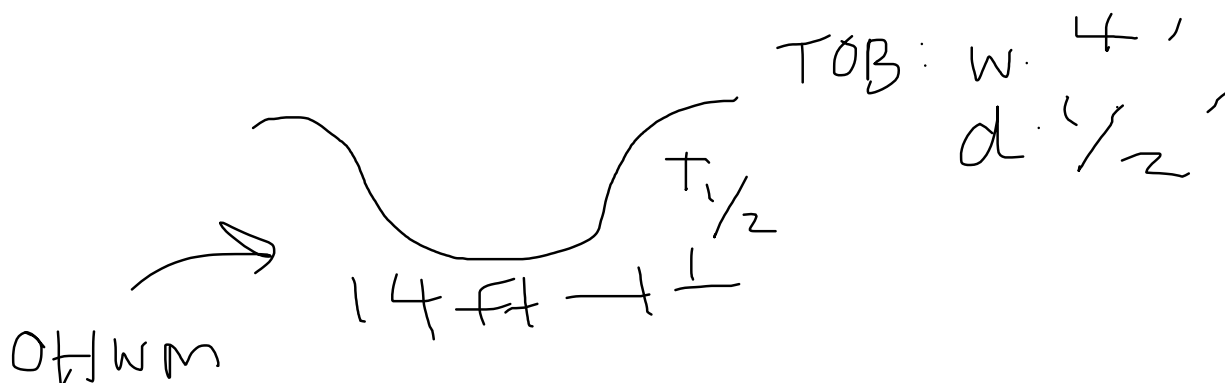
Feature ID:

Cross section ID:

Date:

Time:

Cross section drawing:



OHWM

GPS point: \_\_\_\_\_

Indicators:

☒ Change in average sediment texture

☐ Change in vegetation species

☒ Change in vegetation cover

☒ Break in bank slope

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

Comments:

Three OHWM indicators observed: change in avg sediment texture, change in veg cover and break in bank slope

Floodplain unit:

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_% Tree: \_\_\_\_\_% Shrub: \_\_\_\_\_% Herb: \_\_\_\_\_%

Community successional stage:

☐ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

Indicators:

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☐ Presence of bed and bank

☐ Benches

☐ Soil development

☐ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

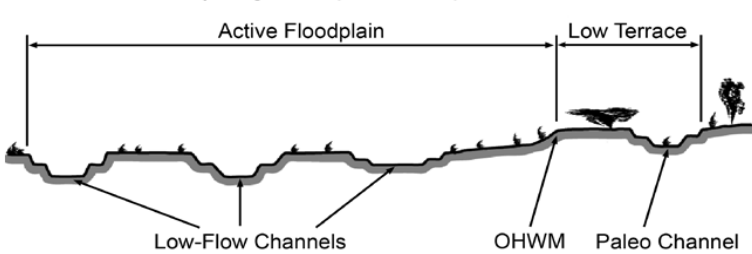
☐ Other: \_\_\_\_\_

Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 05-12		<b>Feature ID:</b> D05-120		<b>Date:</b> 9/4/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> SF PF					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Lassen County <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.76458, -120.03987		
<b>Potential anthropogenic influences on the channel system:</b> Roadway, agriculture					
<b>Brief site description:</b> Ephemeral stream. Top of bank and OHWM are the same. Culvert C06-12.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS Imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div style="text-align: center;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other: _____             </div> </div> </li> </ol>					

### Wentworth Size Classes

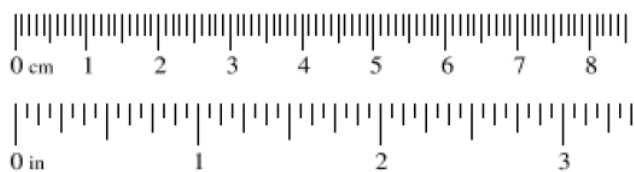
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud



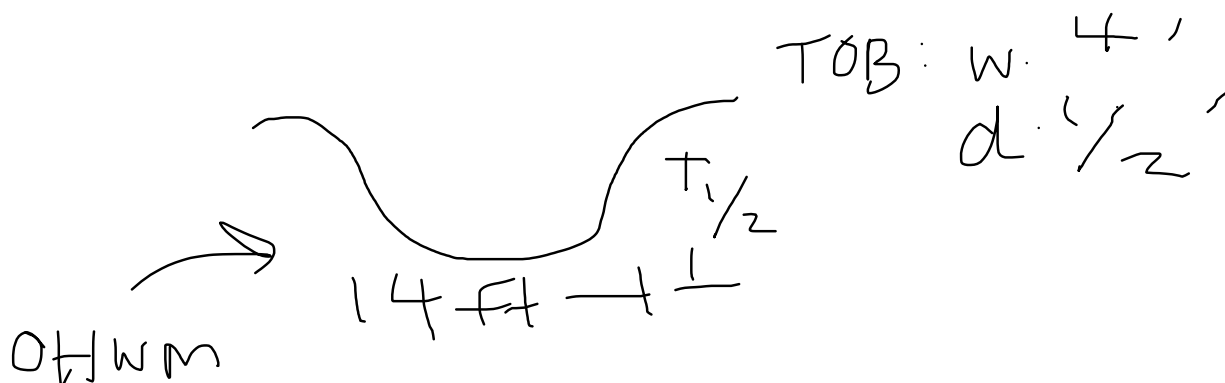
Feature ID:

Cross section ID:

Date:

Time:

Cross section drawing:



OHWM

GPS point: \_\_\_\_\_

Indicators:

☒ Change in average sediment texture

☐ Change in vegetation species

☒ Change in vegetation cover

☒ Break in bank slope

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

Comments:

Three OHWM indicators observed: change in avg sediment texture, change in veg cover and break in bank slope

Floodplain unit:

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

Indicators:

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☐ Presence of bed and bank

☐ Benches

☐ Soil development

☐ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

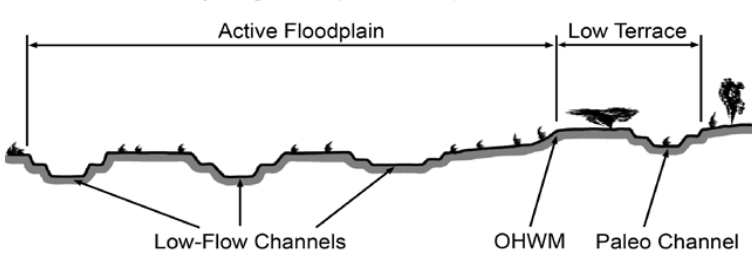
☐ Other: \_\_\_\_\_

Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 06-12		<b>Feature ID:</b> D06-12		<b>Date:</b> 9/5/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> SF PF					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b>  <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.74857, -120.03999		
<b>Potential anthropogenic influences on the channel system:</b> Roadways (Hwy 395 and frontage road)					
<b>Brief site description:</b> Small ephemeral stream between two culverts, excavated/less vegetated and wider near C08-12, TOB same as OHWM					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS Imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer         </div> <div style="text-align: center;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:         </div> </div>					



### Wentworth Size Classes

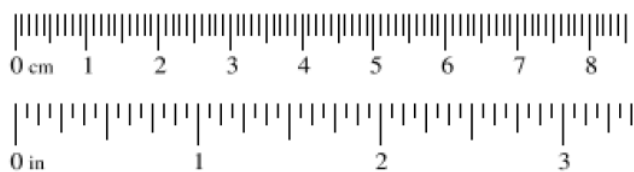
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud



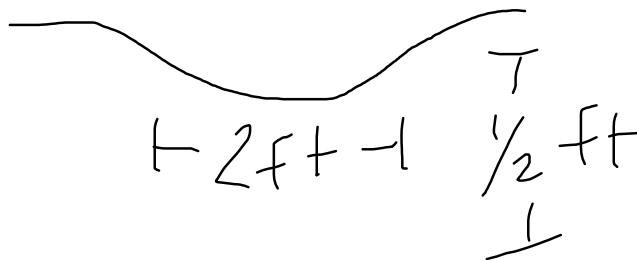
Feature ID:

Cross section ID:

Date:

Time:

Cross section drawing:



OHWM

GPS point: \_\_\_\_\_

Indicators:

☒ Change in average sediment texture

☐ Change in vegetation species

☒ Change in vegetation cover

☒ Break in bank slope

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

Comments:

Three OHWM indicators observed: change in vegetation cover, change in sediment texture and break in bank slope

Floodplain unit:

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

Indicators:

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☐ Presence of bed and bank

☐ Benches

☐ Soil development

☐ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA		<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)	
<input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks		<input type="checkbox"/> Soil development	
<input type="checkbox"/> Ripples		<input type="checkbox"/> Surface relief	
<input type="checkbox"/> Drift and/or debris		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Presence of bed and bank		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Benches		<input type="checkbox"/> Other: _____	
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA		<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)	
<input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks		<input type="checkbox"/> Soil development	
<input type="checkbox"/> Ripples		<input type="checkbox"/> Surface relief	
<input type="checkbox"/> Drift and/or debris		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Presence of bed and bank		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Benches		<input type="checkbox"/> Other: _____	
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 07-12		<b>Feature ID:</b> D07-12		<b>Date:</b> 9/5/2019	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> SF PF					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Lassen County <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.74414, -120.04002		
<b>Potential anthropogenic influences on the channel system:</b> Roadways (hwy 395 and frontage road)					
<b>Brief site description:</b> Deeply incised ephemeral stream between C09-12 and C10-12, highly eroded around C10-12, vegetation debris throughout, TOB wider than OHWM (see below)					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS Imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS		<input type="checkbox"/> Other:	
<input type="checkbox"/> Digitized on computer					

### Wentworth Size Classes

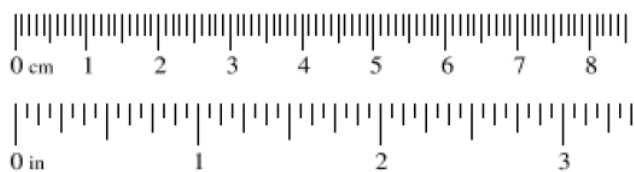
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud



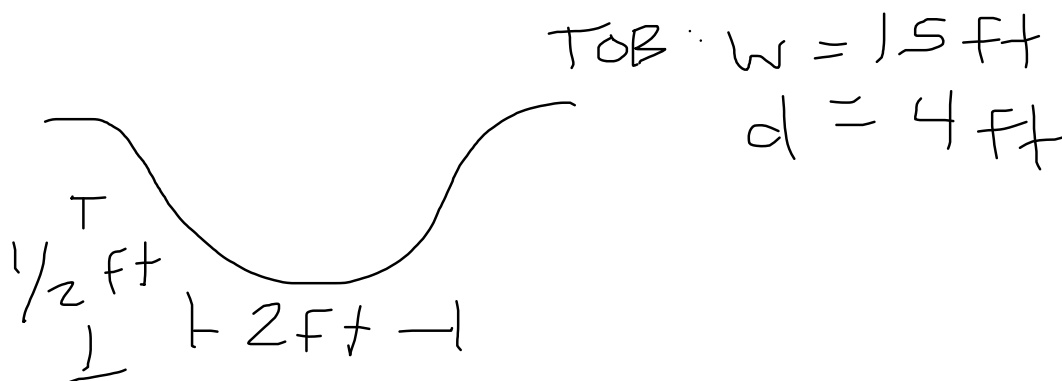
Feature ID:

Cross section ID:

Date:

Time:

Cross section drawing:



OHWM

GPS point: SP 07-12

Indicators:



Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

Comments:

Three OHWM indicators observed: change in vegetation cover, change in sediment texture and break in bank slope

Floodplain unit:



Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Early (herbaceous & seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

Indicators:



Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



Other: \_\_\_\_\_

Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# **Arid West Ephemeral and Intermittent Streams OHWM Datasheet**

<b>Sampling Point:</b> SP 08-12		<b>Feature ID:</b> D08-12		<b>Date:</b> 9/5/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> SF PF					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Lassen County <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.74153, -120.04033		
<b>Potential anthropogenic influences on the channel system:</b> Roadways (hwy 395 and frontage road)					
<b>Brief site description:</b> Deeply incised ephemeral stream between C11-12 and C12-12, heavily eroded around C12-12, TOB wider than OHWM (see below)					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS Imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph			<input checked="" type="checkbox"/> GPS		
<input type="checkbox"/> Digitized on computer			<input type="checkbox"/> Other:		



### Wentworth Size Classes

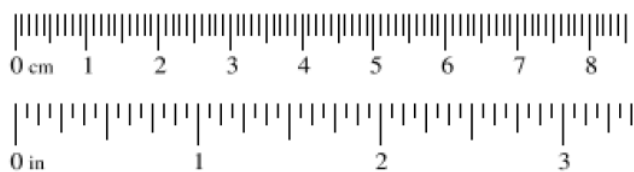
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud



Feature ID:

Cross section ID:

Date:

Time:

Cross section drawing:



OHWM

GPS point: SP 08-12

Indicators:

☒ Change in average sediment texture

☐ Change in vegetation species

☒ Change in vegetation cover

☒ Break in bank slope

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

Comments:

Three OHWM indicators observed: change in vegetation cover, change in sediment texture and break in bank slope

Floodplain unit:

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_% Tree: \_\_\_\_\_% Shrub: \_\_\_\_\_% Herb: \_\_\_\_\_%

Community successional stage:

☐ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

Indicators:

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☐ Presence of bed and bank

☐ Benches

☐ Soil development

☐ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

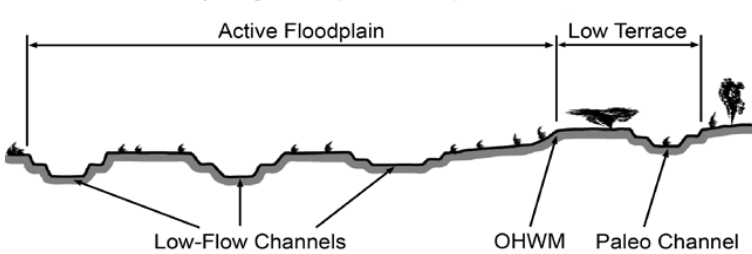
☐ Other: \_\_\_\_\_

Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA		<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)	
<input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks		<input type="checkbox"/> Soil development	
<input type="checkbox"/> Ripples		<input type="checkbox"/> Surface relief	
<input type="checkbox"/> Drift and/or debris		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Presence of bed and bank		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Benches		<input type="checkbox"/> Other: _____	
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA		<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)	
<input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks		<input type="checkbox"/> Soil development	
<input type="checkbox"/> Ripples		<input type="checkbox"/> Surface relief	
<input type="checkbox"/> Drift and/or debris		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Presence of bed and bank		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Benches		<input type="checkbox"/> Other: _____	
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 09-12		<b>Feature ID:</b> D09-12		<b>Date:</b> 9/5/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> SF PF					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Lassen County <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.72836, 120.03917		
<b>Potential anthropogenic influences on the channel system:</b> Roadway (hwy 395)					
<b>Brief site description:</b> Deeply incised ephemeral stream flows to the west from C13-12 (no water present), excavated near C13-12, large boulders to the west, TOB wider than OHWM (see below)					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS Imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer         </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:         </div> </div>					

### Wentworth Size Classes

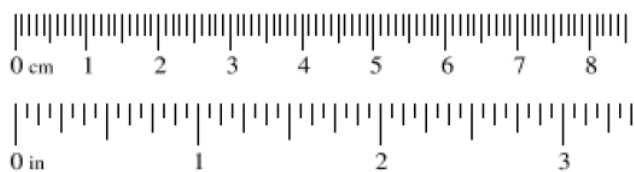
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud



Feature ID:

Cross section ID:

Date:

Time:

Cross section drawing:

OHWM

1/2 ft

4 ft

TOB: w = 15 ft  
d = 3 ft

OHWM

GPS point: \_\_\_\_\_

Indicators:

☒ Change in average sediment texture

☐ Change in vegetation species

☒ Change in vegetation cover

☒ Break in bank slope

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

Comments:

Three OHWM indicators observed: change in vegetation cover, change in sediment texture and break in bank slope

Floodplain unit:

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

Indicators:

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☐ Presence of bed and bank

☐ Benches

☐ Soil development

☐ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 10-10		<b>Feature ID:</b> D10-12		<b>Date:</b> 9/5/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> SF PF					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Lassen County <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.72414, 120.03875			
<b>Potential anthropogenic influences on the channel system:</b> Roadway (hwy 395), bridge (Scott Undercrossing, bridge 7-75R)					
<b>Brief site description:</b> Ephemeral stream flowing under Scott Undercrossing (no water present), TOB same as OHWM, delineated from bridge (6' fence restricting access)					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS Imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			



### Wentworth Size Classes

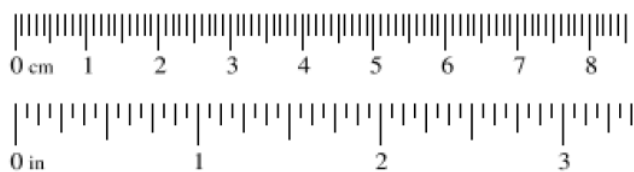
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud



Feature ID:

Cross section ID:

Date:

Time:

Cross section drawing:



OHWM

GPS point: \_\_\_\_\_

Indicators:

☒ Change in average sediment texture

☐ Change in vegetation species

☒ Change in vegetation cover

☒ Break in bank slope

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

Comments:

Three OHWM indicators observed: change in vegetation cover, change in sediment texture and break in bank slope

Floodplain unit:

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

Indicators:

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☐ Presence of bed and bank

☐ Benches

☐ Soil development

☐ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA		<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)	
<input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks		<input type="checkbox"/> Soil development	
<input type="checkbox"/> Ripples		<input type="checkbox"/> Surface relief	
<input type="checkbox"/> Drift and/or debris		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Presence of bed and bank		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Benches		<input type="checkbox"/> Other: _____	
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA		<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)	
<input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks		<input type="checkbox"/> Soil development	
<input type="checkbox"/> Ripples		<input type="checkbox"/> Surface relief	
<input type="checkbox"/> Drift and/or debris		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Presence of bed and bank		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Benches		<input type="checkbox"/> Other: _____	
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 11-12		<b>Feature ID:</b> D11-12		<b>Date:</b> 9/5/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> SF PF					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Lassen County <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.71280, -120.03685		
<b>Potential anthropogenic influences on the channel system:</b> Roadway (hwy 395)					
<b>Brief site description:</b> Small ephemeral stream with heavily vegetated banks flowing through C14-12, TOB same as OHWM					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS Imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph			<input checked="" type="checkbox"/> GPS		
<input type="checkbox"/> Digitized on computer			<input type="checkbox"/> Other:		

### Wentworth Size Classes

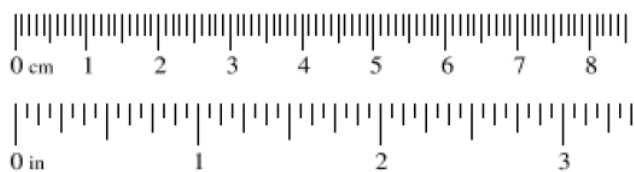
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud



Feature ID:

Cross section ID:

Date:

Time:

Cross section drawing:



OHWM

GPS point: SP 11-12

Indicators:

- ☒ Change in average sediment texture  
☐ Change in vegetation species  
☒ Change in vegetation cover

- ☒ Break in bank slope  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

Comments:

Three OHWM indicators observed: change in vegetation cover, change in sediment texture and break in bank slope

Floodplain unit:

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

- ☐ NA  
☐ Early (herbaceous & seedlings)  
☐ Mid (herbaceous, shrubs, saplings)  
☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks  
☐ Ripples  
☐ Drift and/or debris  
☐ Presence of bed and bank  
☐ Benches  
☐ Soil development  
☐ Surface relief  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 12-12		<b>Feature ID:</b> D12-12		<b>Date:</b> 9/5/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Sierra County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> SF PF					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> Sierra County <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.70612, -120.03473			
<b>Potential anthropogenic influences on the channel system:</b> Roadway (hwy 395)					
<b>Brief site description:</b> Small ephemeral stream flowing through C15-12, excavated/vegetation removed around C15-12 and banks (see photos), TOB same as OHWM					
<b>Checklist of resources (if available):</b>					
<input checked="" type="checkbox"/> Aerial photography <b>Dates:</b> ESRI GIS Imagery		<input type="checkbox"/> Stream gage data <b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies:		Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<b>Hydrogeomorphic Floodplain Units</b>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud



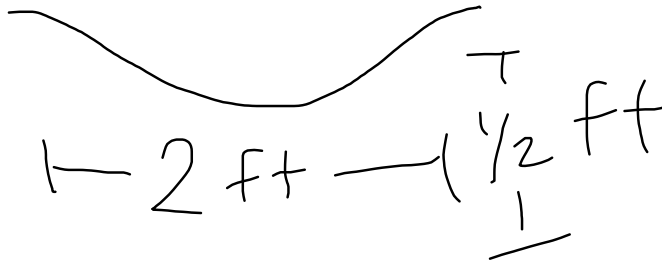
Feature ID:

Cross section ID:

Date:

Time:

Cross section drawing:



OHWM

GPS point: \_\_\_\_\_

Indicators:

- ☒ Change in average sediment texture  
☐ Change in vegetation species  
☒ Change in vegetation cover

- ☒ Break in bank slope  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

Comments:

Three OHWM indicators observed: change in vegetation cover, change in sediment texture and break in bank slope

Floodplain unit:

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

- ☐ NA  
☐ Early (herbaceous & seedlings)  
☐ Mid (herbaceous, shrubs, saplings)  
☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks  
☐ Ripples  
☐ Drift and/or debris  
☐ Presence of bed and bank  
☐ Benches

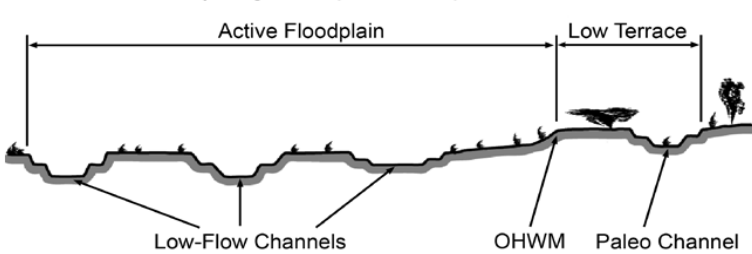
- ☐ Soil development  
☐ Surface relief  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 13-12		<b>Feature ID:</b> D13-12		<b>Date:</b> 9/5/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Sierra County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> SF PF					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Sierra County <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.69451, -120.02379		
<b>Potential anthropogenic influences on the channel system:</b> Roadway (hwy 395)					
<b>Brief site description:</b> Small, rocky ephemeral stream flowing through C16-13, TOB wider than OHWM (see below)					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS Imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer         </div> <div style="width: 45%;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other: _____         </div> </div>					

### Wentworth Size Classes

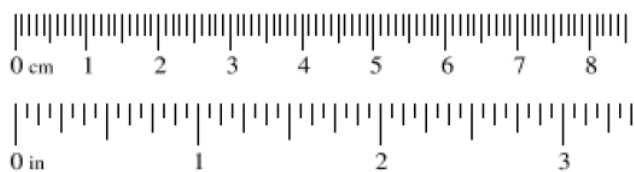
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud



Feature ID:

Cross section ID:

Date:

Time:

Cross section drawing:



TOB: W = 10 ft  
d = 3 ft

OHWM

GPS point: SP 13-12

Indicators:

- ☒ Change in average sediment texture  
☐ Change in vegetation species  
☒ Change in vegetation cover

- ☒ Break in bank slope  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

Comments:

Three OHWM indicators observed: change in vegetation cover, change in sediment texture and break in bank slope

Floodplain unit:

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks  
☐ Ripples  
☐ Drift and/or debris  
☐ Presence of bed and bank  
☐ Benches

- ☐ Soil development  
☐ Surface relief  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP14-12		<b>Feature ID:</b> D14-12		<b>Date:</b> 9/5/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Sierra County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> SF PF					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Sierra County <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.68115, -120.00960		
<b>Potential anthropogenic influences on the channel system:</b> Roadway (hwy 395)					
<b>Brief site description:</b> Small ephemeral channel flowing through C17-12, more vegetated in the channel to the west, TOB the same as OHWM					
<b>Checklist of resources (if available):</b>					
<input checked="" type="checkbox"/> Aerial photography <b>Dates:</b> ESRI GIS Imagery		<input type="checkbox"/> Stream gage data <b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies:		Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<b>Hydrogeomorphic Floodplain Units</b>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			



### Wentworth Size Classes

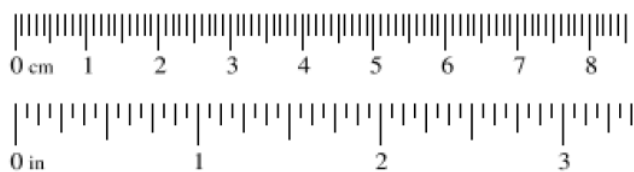
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud



Feature ID:

Cross section ID:

Date:

Time:

Cross section drawing:



OHWM

GPS point: SP 14-12

Indicators:

- ☒ Change in average sediment texture  
☐ Change in vegetation species  
☒ Change in vegetation cover

- ☒ Break in bank slope  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

Comments:

Three OHWM indicators observed: change in vegetation cover, change in sediment texture and break in bank slope

Floodplain unit:

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

- ☐ NA  
☐ Early (herbaceous & seedlings)  
☐ Mid (herbaceous, shrubs, saplings)  
☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks  
☐ Ripples  
☐ Drift and/or debris  
☐ Presence of bed and bank  
☐ Benches

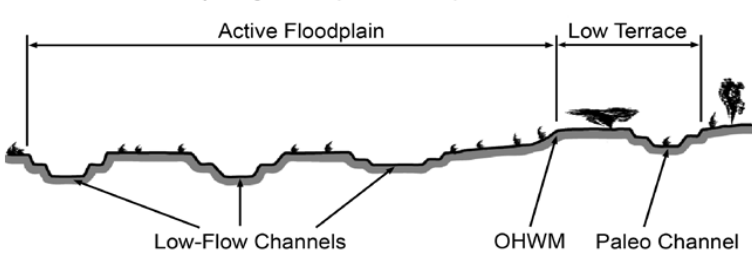
- ☐ Soil development  
☐ Surface relief  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 15-12		<b>Feature ID:</b> D15-12		<b>Date:</b> 9/5/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Sierra County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> SF PF					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Sierra County <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.67407, -120.00213		
<b>Potential anthropogenic influences on the channel system:</b> Roadways (hwy 395 and Long Valley Rd)					
<b>Brief site description:</b> Small, deeply incised ephemeral stream flowing through C18-12, TOB same as OHWM (see below)					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS Imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div style="width: 45%;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

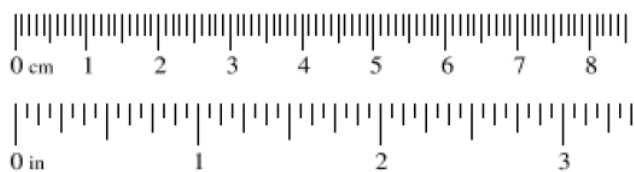
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud



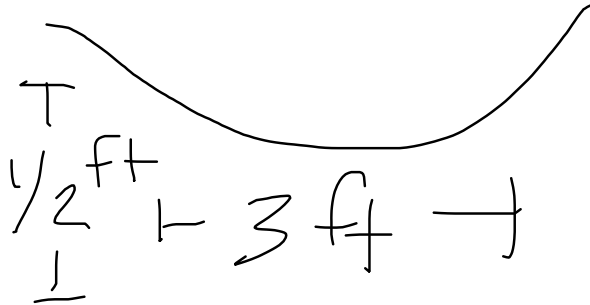
Feature ID:

Cross section ID:

Date:

Time:

Cross section drawing:



OHWM

GPS point: \_\_\_\_\_

Indicators:

- ☒ Change in average sediment texture  
☐ Change in vegetation species  
☒ Change in vegetation cover

- ☒ Break in bank slope  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

Comments:

Three OHWM indicators observed: change in vegetation cover, change in sediment texture and break in bank slope

Floodplain unit:

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

- ☐ NA  
☐ Early (herbaceous & seedlings)  
☐ Mid (herbaceous, shrubs, saplings)  
☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks  
☐ Ripples  
☐ Drift and/or debris  
☐ Presence of bed and bank  
☐ Benches

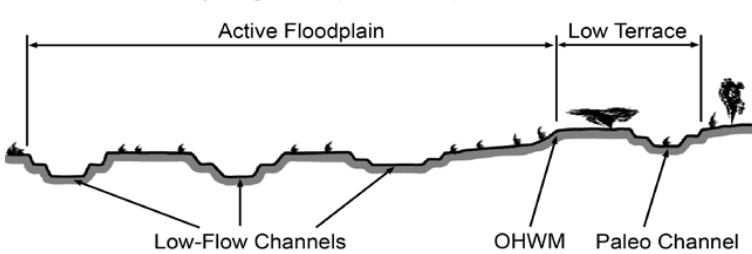
- ☐ Soil development  
☐ Surface relief  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> SP 16-12		<b>Feature ID:</b> D16-12		<b>Date:</b> 9/5/2019	
<b>Project:</b> Zayo Fiberoptic Interconnect Project					
<b>Location:</b> Sierra County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> SF PF					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?			<b>Location Details:</b> Sierra County <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.67410, 120.00213		
<b>Potential anthropogenic influences on the channel system:</b> Roadways (hwy 395 and Long Valley Rd)					
<b>Brief site description:</b> Unvegetated, eroded roadside ditch, flowing into D15-12 over C18-12					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> ESRI GIS Imagery  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies:         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>Identify any indicators present at the location.</li> </ol> </li> <li>Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					



### Wentworth Size Classes

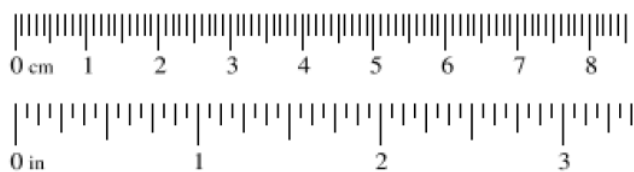
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1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud



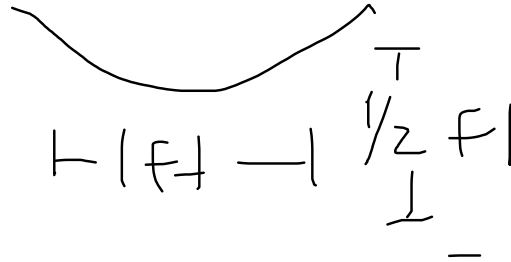
Feature ID:

Cross section ID:

Date:

Time:

Cross section drawing:



OHWM

GPS point: \_\_\_\_\_

Indicators:

- ☒ Change in average sediment texture  
☐ Change in vegetation species  
☒ Change in vegetation cover

- ☒ Break in bank slope  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

Comments:

Three OHWM indicators observed: change in vegetation cover, change in sediment texture and break in bank slope, unvegetated roadside ditch

Floodplain unit:

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

- ☐ NA  
☐ Early (herbaceous & seedlings)  
☐ Mid (herbaceous, shrubs, saplings)  
☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks  
☐ Ripples  
☐ Drift and/or debris  
☐ Presence of bed and bank  
☐ Benches

- ☐ Soil development  
☐ Surface relief  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_  
☐ Other: \_\_\_\_\_

Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Sampling Point: 100-12		Feature ID: D100-12a		Date: 9/5/2019	
Project: Zayo Fiberoptic Interconnect Project					
Location: Sierra County			Photo begin/end file#: See Field Photos		
Investigator(s): MO, KD					
Y	<input checked="" type="checkbox"/>	/	N	<input type="checkbox"/>	Do normal circumstances exist on the site?
Y	<input type="checkbox"/>	/	N	<input checked="" type="checkbox"/>	Is the site significantly disturbed?
				Location Details:	
				Adjacent to US 395.	
				Projection: Lambert Datum: NAD83	
				Coordinates: 39.78947, -120.03812	
<b>Potential anthropogenic influences on the channel system:</b> Drainage parallels HWY 395, culvert present at bottom of drainage. Excavated area near culvert. Appears to be an ephemeral drainage that is dry at time of survey.					
<b>Brief site description:</b> Ephemeral drainage, manipulated for storm drainage. Stream runs from the upslope north end on east side of highway.					
<b>Checklist of resources (if available):</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
Dates: ESRI GIS Imagery		Gage number: _____			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies:					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b> </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

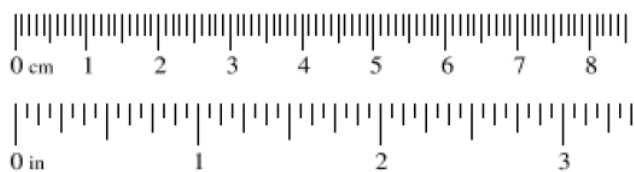
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud



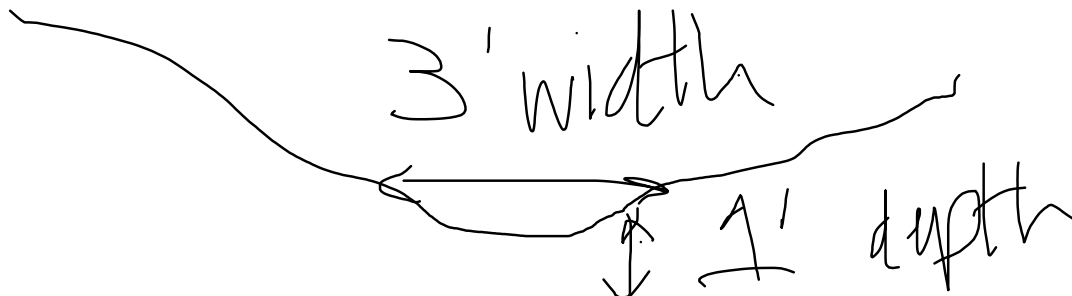
Feature ID:

Cross section ID:

Date:

Time:

Cross section drawing:



OHWM

GPS point: \_\_\_\_\_

Indicators:

☒ Change in average sediment texture

☐ Change in vegetation species

☒ Change in vegetation cover

☒ Break in bank slope

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

Comments:

Change in vegetation cover present at OHWM. Moderate break in slope present. Sediment change with boulders present in the bed of the channel.

Floodplain unit:

☒ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: Sandy loam

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

☒ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

Indicators:

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☒ Presence of bed and bank

☐ Benches

☐ Soil development

☐ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

Comments:

No water present in low-flow channel. Surface relief is present and the bed has boulders in the low-flow channel.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

Sampling Point: <u>7-1</u>		Feature ID: <u>D03-1bx</u>	Date: <u>3/10/2020</u>
Project: <u>Zayo Fiberoptic</u>			
Location: <u>Modoc County</u>		Photo begin/end file#: <u>See Field Photos</u>	
Investigator(s): <u>T. Kayatski, L. Morris</u>			
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		Location Details:
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?		
		Projection: <u>Lambert</u>	Datum: <u>NAD83</u>
		Coordinates: <u>41.9276, -120.3229</u>	
Potential anthropogenic influences on the channel system:			

<b>Brief site description:</b> Flows from east to west via box culvert; mustard growing in streambed.
--

<input checked="" type="checkbox"/> Aerial photography	<input type="checkbox"/> Stream gage data
<b>Dates:</b> _____	<b>Gage number:</b> _____
<input checked="" type="checkbox"/> Topographic maps	Period of record:
<input type="checkbox"/> Geologic maps	<input type="checkbox"/> History of recent effective discharges
<input type="checkbox"/> Vegetation maps	<input type="checkbox"/> Results of flood frequency analysis
<input checked="" type="checkbox"/> Soils maps	<input type="checkbox"/> Most recent shift-adjusted rating
<input type="checkbox"/> Rainfall/precipitation maps	<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event
<input type="checkbox"/> Existing delineation(s) for site	
<input checked="" type="checkbox"/> Global positioning system (GPS)	
<input type="checkbox"/> Other studies	

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
  - a) Record the floodplain unit and GPS position.
  - b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
  - c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:

- |                          |                              |                                     |        |
|--------------------------|------------------------------|-------------------------------------|--------|
| <input type="checkbox"/> | Mapping on aerial photograph | <input checked="" type="checkbox"/> | GPS    |
| <input type="checkbox"/> | Digitized on computer        | <input type="checkbox"/>            | Other: |



### Wentworth Size Classes

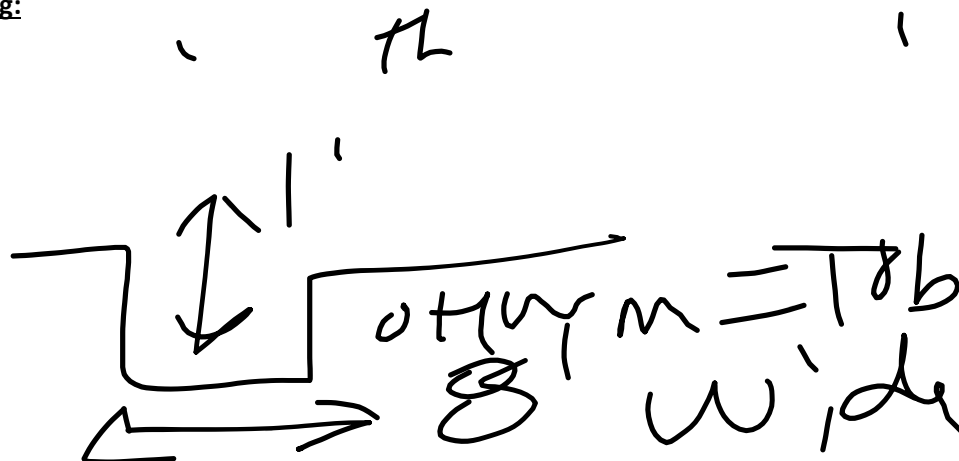
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D13-1x

Cross section ID: 1

Date: 3/10/2020 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Sediment transport visible as flows present during survey; cobbles uncovered/ visible under mustards..

**Floodplain unit:**☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Medium siltTotal veg cover: 6 % Tree: 0 % Shrub: \_\_\_\_\_ % Herb: 6 %

Community successional stage:

☐ NA☒ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☒ Drift and/or debris☒ Presence of bed and bank☒ Benches☒ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Other than dried mustard in channel, streambed devoid of veg.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 5-1x		<b>Feature ID:</b> D03-1x		<b>Date:</b> 3/9/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen, L. Morris, T. Kayatski					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.9692, -120.3038			
<b>Potential anthropogenic influences on the channel system:</b> Near highway					
<b>Brief site description:</b> Stream runs through culvert, under highway					
<b>Checklist of resources (if available)</b> <input checked="" type="checkbox"/> Aerial photography <input type="checkbox"/> Stream gage data <b>Dates:</b> _____ <b>Gage number:</b> _____ <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Period of record: <input type="checkbox"/> Geologic maps <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Vegetation maps <input type="checkbox"/> Results of flood frequency analysis <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and <input type="checkbox"/> Existing delineation(s) for site the most recent event exceeding a 5-year event <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p> <p style="text-align: center;"><b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b></p> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-around;"> <input type="checkbox"/> Mapping on aerial photograph <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Digitized on computer <input type="checkbox"/> Other: </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

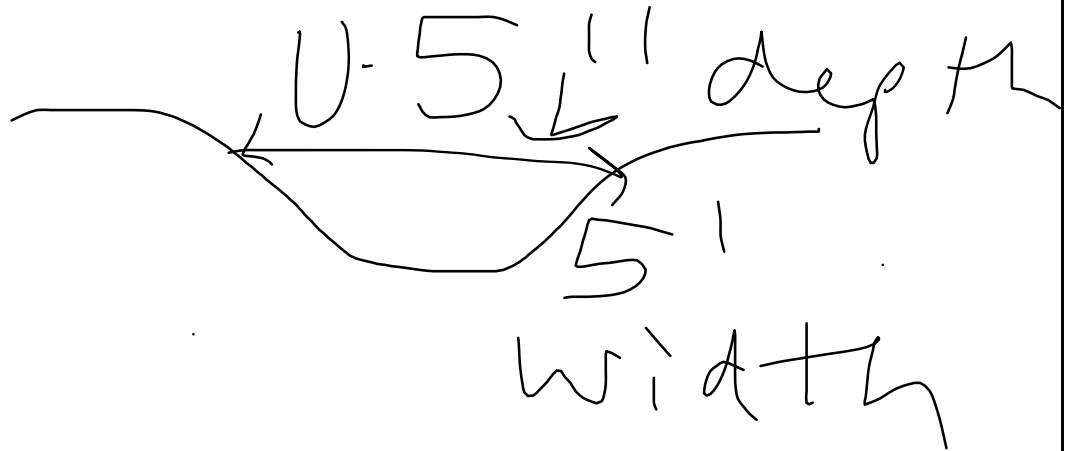


Feature ID: D03-1x

Cross section ID: 1

Date: 3/9/2020

Time: 1:02

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☒ Other: Sediment deposits, debris☐ Other: \_\_\_\_\_**Comments:**

No flows present at time of survey; channel dominated by upland grasses and forbs through culvert flowing under highway.

**Floodplain unit:**☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Medium siltTotal veg cover: 15 % Tree: 0 % Shrub: 6 % Herb: 9 %

Community successional stage:

☐ NA☒ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☒ Drift and/or debris☐ Presence of bed and bank☐ Benches☒ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Shrubs only on banks; not in channel (only herbaceous)

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA <input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Mid (herbaceous, shrubs, saplings) <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks <input type="checkbox"/> Ripples <input type="checkbox"/> Drift and/or debris <input type="checkbox"/> Presence of bed and bank <input type="checkbox"/> Benches		<input type="checkbox"/> Soil development <input type="checkbox"/> Surface relief <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	
<b>Comments:</b>   			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA <input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Mid (herbaceous, shrubs, saplings) <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks <input type="checkbox"/> Ripples <input type="checkbox"/> Drift and/or debris <input type="checkbox"/> Presence of bed and bank <input type="checkbox"/> Benches		<input type="checkbox"/> Soil development <input type="checkbox"/> Surface relief <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	
<b>Comments:</b>   			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 10-1		<b>Feature ID:</b> D04-1bx		<b>Date:</b> 3/10/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> T. Kayatski, L. Morris					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.9452, -120.3148			
<b>Potential anthropogenic influences on the channel system:</b> Concrete box culvert along highway flowing west; cattle grazing throughout stream and adjacent area such that TOP is devoid of herbaceous vegetation (Juniper above bank).					
<b>Brief site description:</b> Wide dry stream with no flows present during time of survey. Flows through culvert, under highway. Stream runs west bisecting grazing land; moderate incising along banks.					
<b>Checklist of resources (if available)</b> <input checked="" type="checkbox"/> Aerial photography <input type="checkbox"/> Stream gage data <b>Dates:</b> _____ <b>Gage number:</b> _____ <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Period of record: <input type="checkbox"/> Geologic maps <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Vegetation maps <input type="checkbox"/> Results of flood frequency analysis <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and <input type="checkbox"/> Existing delineation(s) for site the most recent event exceeding a 5-year event <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies					
<p style="text-align: center;">Hydrogeomorphic Floodplain Units</p> <p style="text-align: center;"> <b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b>  1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.  2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.  3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.  a) Record the floodplain unit and GPS position.  b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.  c) Identify any indicators present at the location.  4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.  5. Identify the OHWM and record the indicators. Record the OHWM position via:  <input type="checkbox"/> Mapping on aerial photograph <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Digitized on computer <input type="checkbox"/> Other: </p>					



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

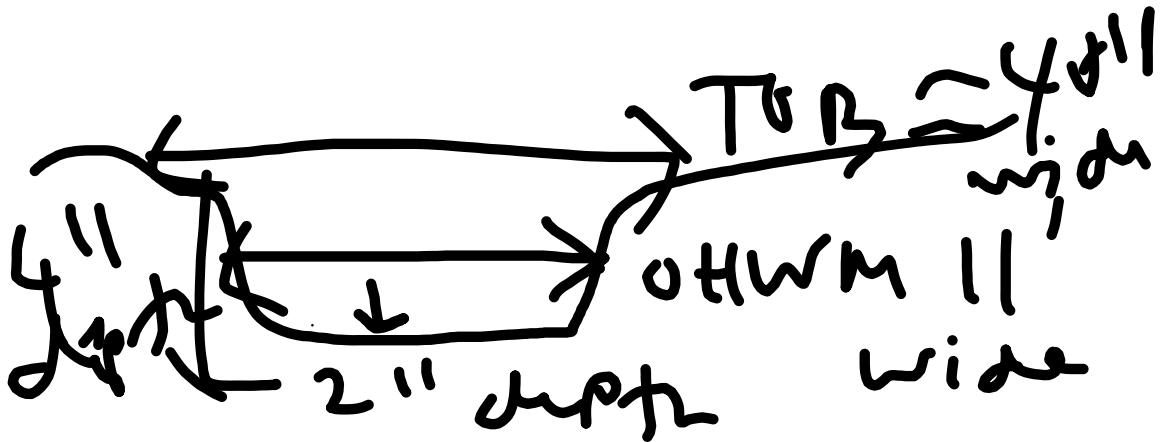


Feature ID: D04-1bx

Cross section ID: 1

Date: 3/9/2020

Time: 1:02

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

No flows present during time of survey; scour present beneath mustard within streambed; ephemeral flows or roadside ditch. Small channel mainly bare ground with cobbles. Comes from eastern side of highway to western side through large culvert flowing under highway.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: Medium siltTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

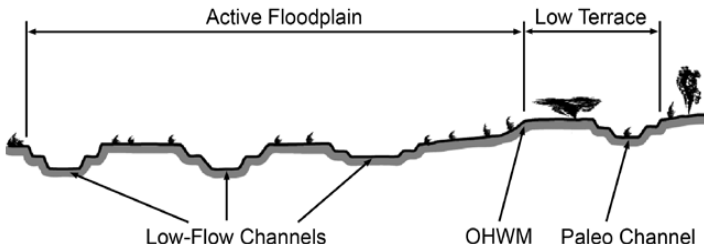
☒ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☒ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Devoid of vegetation in and surrounding channel (other than one Juniper above bank).

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input checked="" type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: <u>3</u> % Tree: _____ % Shrub: _____ % Herb: <u>3</u> %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input checked="" type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input checked="" type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input checked="" type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input checked="" type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			
Benching present above OHWM for floodplain (100 yr. floodplain).			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 6-1x		<b>Feature ID:</b> D04-1x		<b>Date:</b> 3/9/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen, L. Morris, T. Kayatski					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.9666, -120.3048			
<b>Potential anthropogenic influences on the channel system:</b> Near highway					
<b>Brief site description:</b> Stream runs through culvert, under highway					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>   </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHW M and record the indicators. Record the OHW M position via: <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer         </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:         </div> </div>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

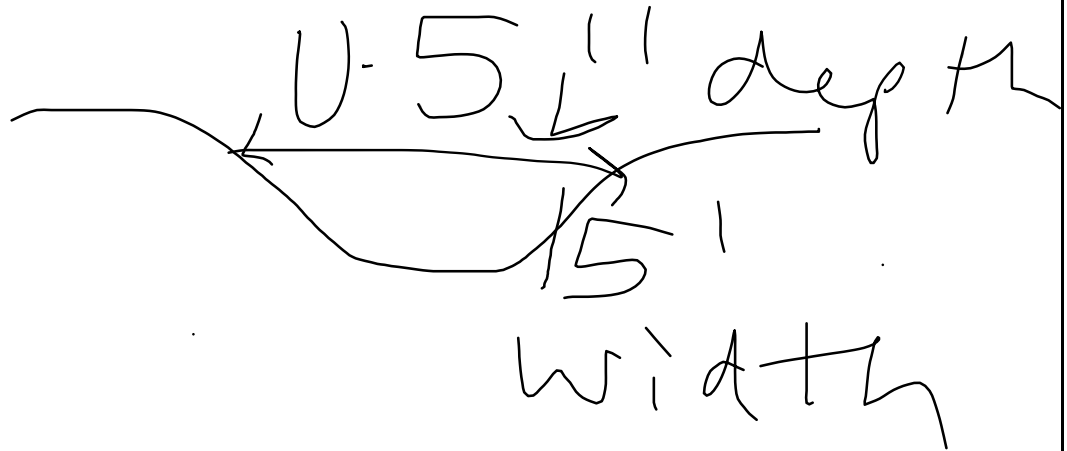


Feature ID: D04-1x

Cross section ID: 1

Date: 3/9/2020

Time: 1:02

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input type="checkbox"/> Break in bank slope |
| <input checked="" type="checkbox"/> Change in vegetation species       | <input type="checkbox"/> Other: _____        |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____        |

**Comments:**

No flows present at time of survey; channel mainly bare ground and tall thistle. Comes from eastern side of highway to western side through large culvert flowing under highway.

**Floodplain unit:**☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Medium siltTotal veg cover: 15 % Tree: 0 % Shrub: 6 % Herb: 9 %

Community successional stage:

- |  |  |
|--|--|
| <input type="checkbox"/> NA  | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input checked="" type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

**Indicators:**

- |  |  |
|--|--|
| <input type="checkbox"/> Mudcracks                           | <input checked="" type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples                             | <input type="checkbox"/> Surface relief              |
| <input type="checkbox"/> Drift and/or debris                 | <input type="checkbox"/> Other: _____                |
| <input checked="" type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____                |
| <input type="checkbox"/> Benches                             | <input type="checkbox"/> Other: _____                |

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

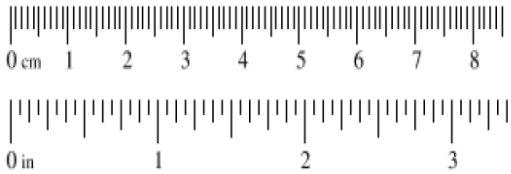
# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

Sampling Point <u>11-1</u>		Feature ID: <u>D05-1bx</u>		Date: <u>3/10/2020</u>	
Project <u>Zayo Fiberoptic</u>					
Location <u>Modoc County</u>		Photo begin/end file#: <u>See Field Photos</u>			
Investigator(s) <u>T. Kayatski, L. Morris</u>					
<input checked="" type="checkbox"/> / <input type="checkbox"/> No normal circumstances exist on the site <input type="checkbox"/> / <input checked="" type="checkbox"/> Is the site significantly disturbed?		Location Details:  Projection <u>Lambert</u> Datum <u>NAD83</u> Coordinates <u>41.9571, -120.3094</u>			
Potential anthropogenic influences on the channel system <u>Concrete box culvert along highway flowing west.</u>					
Brief site description: <u>Stream starts farther offset from road beyond property fence line; runs through culvert, under highway. Stream runs southwest beyond fence.</u>					
Checklist of resources (if available)					
<input checked="" type="checkbox"/> Aerial photography Dates _____		<input type="checkbox"/> Stream gage data Gage number _____			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation map <input type="checkbox"/> Existing delineation(s) for events and the most recent event exceeding <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies		Period of record: <input type="checkbox"/> History of recent effective discharge <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year			
Hydrogeomorphic Floodplain Units					
Procedure for identifying and characterizing the floodplain units to assist in identifying the					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Identify the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay



**cross section drawing****OHWM****GPS point** \_\_\_\_\_**Indicators**

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Change in average sediment te | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation spe                 | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation co       | <input type="checkbox"/> Other: _____                   |

**Comments:**

Intermittent flows present; at channel mainly bare ground with cobbles.  
Comes from eastern side of highway to western side through large culvert  
flowing under highway.

**Floodplain unit** ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace**GPS point** \_\_\_\_\_**Characteristics of the floodplain**

Average sediment textu \_\_\_\_\_

Total veg cover \_\_\_\_ % Tree \_\_\_\_ % Shrub \_\_\_\_ % Herb \_\_\_\_ %

Community successional st

- |   |  |
|---|--|
| <input type="checkbox"/> NA                         | <input type="checkbox"/> Mid (herbaceous, shrubs, sapling      |
| <input type="checkbox"/> Early (herbaceous & seedli | <input type="checkbox"/> Late (herbaceous, shrubs, mature tree |

**Indicator**

- |   |   |
|---|---|
| <input type="checkbox"/> Mudcracks              | <input type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripple                 | <input type="checkbox"/> Surface relie    |
| <input type="checkbox"/> Drift and/or debr      | <input type="checkbox"/> Other _____      |
| <input type="checkbox"/> Presence of bed and ba | <input type="checkbox"/> Other _____      |
| <input type="checkbox"/> Benche                 | <input type="checkbox"/> Other _____      |

**Comments**

<b>Feature ID:</b>	<b>Cross section ID</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point</b> _____			
<b>Characteristics of the floodplain</b>			
Average sediment textu <u>Sandy loam</u>			
Total veg cover ____ % Tree ____ % Shrub ____ % Herb ____ %			
Community successional st			
<input type="checkbox"/> NA		<input type="checkbox"/> Mid (herbaceous, shrubs, sapling	
<input type="checkbox"/> Early (herbaceous & seedli		<input type="checkbox"/> Late (herbaceous, shrubs, mature tree	
<b>Indicator</b>			
<input type="checkbox"/> Mudcracks		<input type="checkbox"/> Soil development	
<input type="checkbox"/> Ripple		<input type="checkbox"/> Surface relie	
<input type="checkbox"/> Drift and/or debr		<input type="checkbox"/> Other _____	
<input type="checkbox"/> Presence of bed and ba		<input type="checkbox"/> Other _____	
<input type="checkbox"/> Benche		<input type="checkbox"/> Other _____	
<b>Comments</b>			

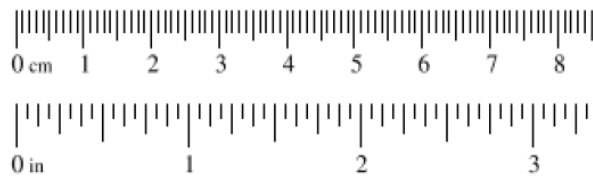
<b>Floodplain unit</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point</b> _____			
<b>Characteristics of the floodplain</b>			
Average sediment textu _____			
Total veg cover ____ % Tree ____ % Shrub ____ % Herb ____ %			
Community successional st			
<input type="checkbox"/> NA		<input type="checkbox"/> Mid (herbaceous, shrubs, sapling	
<input type="checkbox"/> Early (herbaceous & seedli		<input type="checkbox"/> Late (herbaceous, shrubs, mature tree	
<b>Indicator</b>			
<input type="checkbox"/> Mudcracks		<input type="checkbox"/> Soil development	
<input type="checkbox"/> Ripple		<input type="checkbox"/> Surface relie	
<input type="checkbox"/> Drift and/or debr		<input type="checkbox"/> Other _____	
<input type="checkbox"/> Presence of bed and ba		<input type="checkbox"/> Other _____	
<input type="checkbox"/> Benche		<input type="checkbox"/> Other _____	
<b>Comments</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 8-1x		<b>Feature ID:</b> D05-1x		<b>Date:</b> 3/10/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> L. Morris, T. Kayatski					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b>		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.9654, -120.3055		
<b>Potential anthropogenic influences on the channel system:</b> Concrete box culvert along highway flowing west.					
<b>Brief site description:</b> Stream runs through culvert, under highway					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> _____		<b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

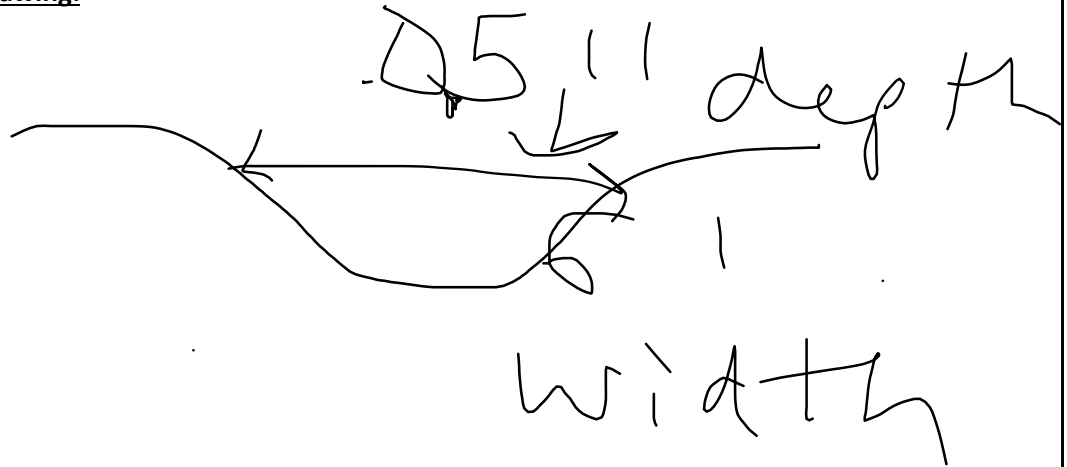
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D05-1x

Cross section ID: 1

Date: 3/10/2020 Time: 1:02

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

No flows present at time of survey; channel mainly bare ground. Comes from eastern side of highway to western side through large culvert flowing under highway.

**Floodplain unit:**☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Medium siltTotal veg cover: 30 % Tree: 0 % Shrub: 0 % Herb: 30 %

Community successional stage:

☐ NA☒ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☒ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 15-1		<b>Feature ID:</b> D07-1bx		<b>Date:</b> 3/10/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> T. Kayatski, L. Morris					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.9637, -120.3063			
<b>Potential anthropogenic influences on the channel system:</b> Concrete box culvert along highway flowing west.					
<b>Brief site description:</b> Stream runs through culvert, under highway					
<b>Checklist of resources (if available)</b> <input checked="" type="checkbox"/> Aerial photography <input type="checkbox"/> Stream gage data <b>Dates:</b> _____ <b>Gage number:</b> _____ <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Period of record: <input type="checkbox"/> Geologic maps <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Vegetation maps <input type="checkbox"/> Results of flood frequency analysis <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and <input type="checkbox"/> Existing delineation(s) for site the most recent event exceeding a 5-year event <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p> <p style="text-align: center;"><b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b></p> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-around;"> <input type="checkbox"/> Mapping on aerial photograph <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Digitized on computer <input type="checkbox"/> Other: </div> </li> </ol>					



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

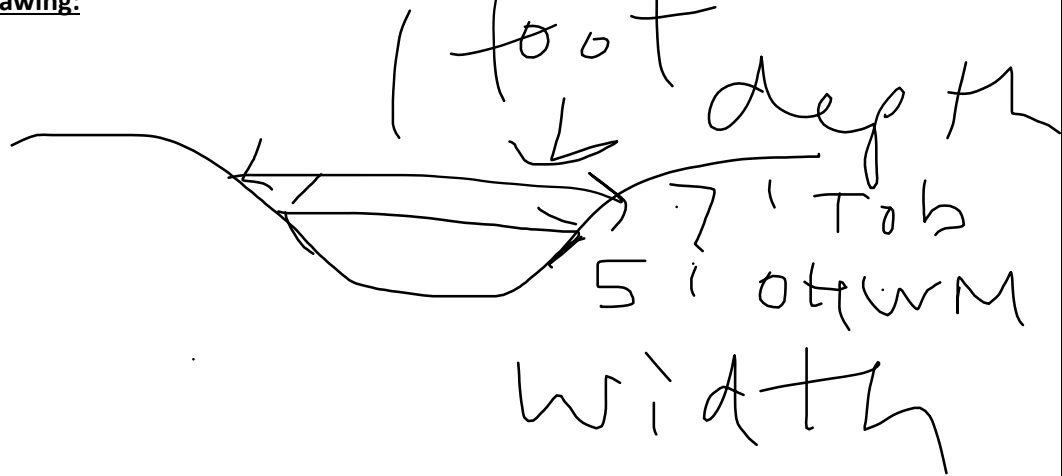


Feature ID: D07-1bx

Cross section ID: 1

Date: 3/9/2020

Time: 1:02

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

No flows present at time of survey; channel mainly bare ground with cobbles. Comes from eastern side of highway to western side through large culvert flowing under highway.

**Floodplain unit:**☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Medium siltTotal veg cover: 3 % Tree: 0 % Shrub: 0 % Herb: 3 %

Community successional stage:

☐ NA☒ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☒ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input checked="" type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: <u>20</u> %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input checked="" type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input checked="" type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input checked="" type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			
One small bench for floodplain bringing TOB out an additional foot in width.			

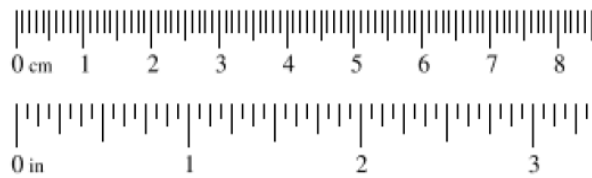
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 10-1x		<b>Feature ID:</b> D07-1x		<b>Date:</b> 3/10/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> T. Kayatski, L. Morris					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 419610, -120.3075			
<b>Potential anthropogenic influences on the channel system:</b> Concrete box culvert along highway flowing west.					
<b>Brief site description:</b> Stream runs through culvert, under highway					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>  </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

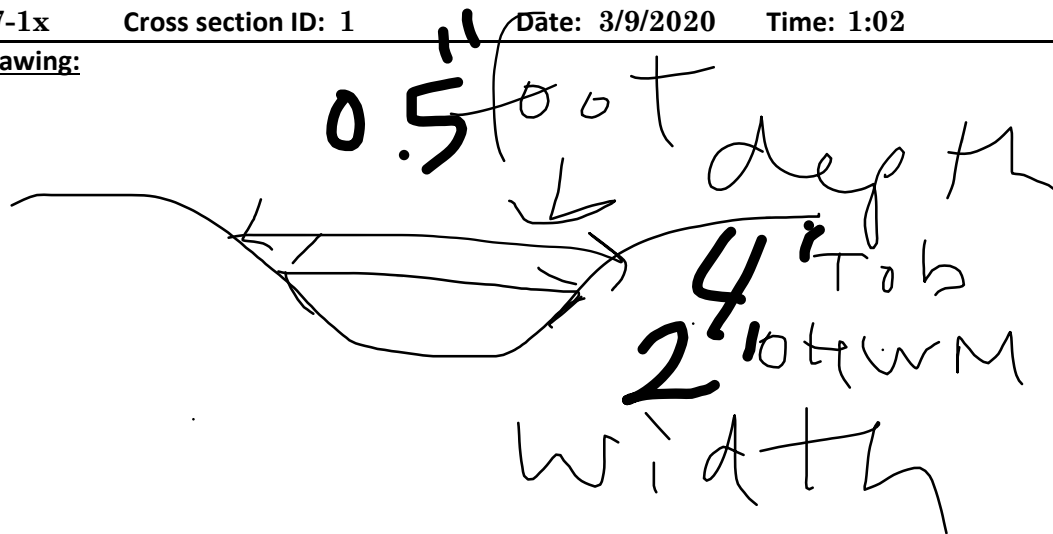


Feature ID: D07-1x

Cross section ID: 1

Date: 3/9/2020

Time: 1:02

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

No flows present at time of survey; channel mainly bare ground with cobbles. Comes from eastern side of highway to western side through large culvert flowing under highway.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: Medium siltTotal veg cover: 3 % Tree: 0 % Shrub: 0 % Herb: 3 %

Community successional stage:

☐ NA☒ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☒ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input checked="" type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: <u>3</u> % Tree: _____ % Shrub: _____ % Herb: <u>3</u> %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input checked="" type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input checked="" type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input checked="" type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			
One small bench for floodplain bringing TOB out an additional foot in width; scarce patch of mustard in streambed.			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input checked="" type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: <u>10</u> % Tree: _____ % Shrub: _____ % Herb: <u>10</u> %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input checked="" type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input checked="" type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input checked="" type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			
Marginal bench above OHWM dominated by annual grasses.			

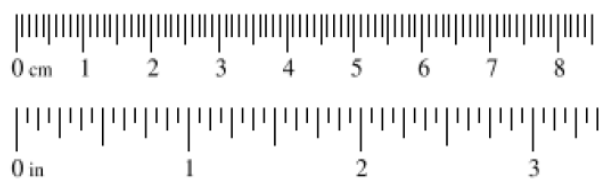
# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 14-1x		<b>Feature ID:</b> D11-1x		<b>Date:</b> 3/10/2020					
<b>Project:</b> Zayo Fiberoptic									
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos						
<b>Investigator(s):</b> T. Kayatski, L. Morris									
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.9367, -120.3188							
<b>Potential anthropogenic influences on the channel system:</b> Agricultural ditch at end of fence line, runs under highway via pipe.									
<b>Brief site description:</b> Wide dry stream with no flows present during time of survey. Flows through culvert, under highway. Stream runs west bisecting grazing land; moderate incising along banks.									
<b>Checklist of resources (if available)</b> <input checked="" type="checkbox"/> Aerial photography <input type="checkbox"/> Stream gage data <b>Dates:</b> _____ <b>Gage number:</b> _____ <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Period of record: <input type="checkbox"/> Geologic maps <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Vegetation maps <input type="checkbox"/> Results of flood frequency analysis <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and <input type="checkbox"/> Existing delineation(s) for site the most recent event exceeding a 5-year event <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies									
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>									
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via: <table border="0" style="width: 100%;"> <tr> <td><input type="checkbox"/> Mapping on aerial photograph</td> <td><input checked="" type="checkbox"/> GPS</td> </tr> <tr> <td><input type="checkbox"/> Digitized on computer</td> <td><input type="checkbox"/> Other:</td> </tr> </table> </li> </ol>						<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS	<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:
<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS								
<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:								



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

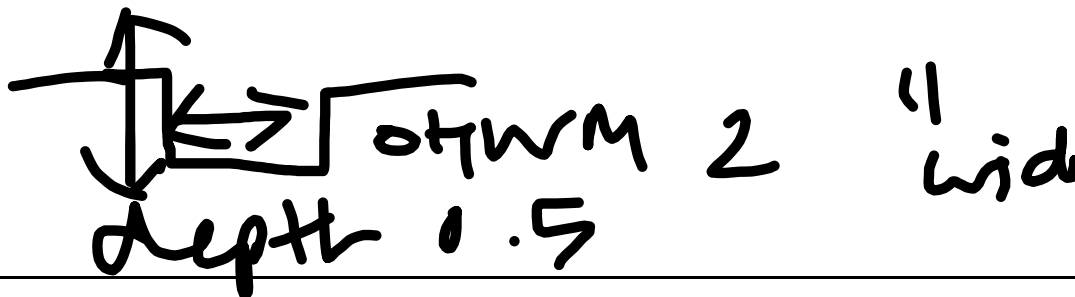


Feature ID: D11-1x

Cross section ID: 1

Date: 3/9/2020

Time: 1:02

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

No flows present during time of survey; scour present beneath mustard within streambed; ephemeral flows or roadside ditch. Small channel mainly bare ground with cobbles. Comes from eastern side of highway to western side through large culvert flowing under highway.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: Medium siltTotal veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

☒ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☒ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Devoid of vegetation in and surrounding channel (other than one Juniper above bank).

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: <u>3</u> %			
Community successional stage:			
<input checked="" type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			
Lacks floodplain adjacent to ditch.			

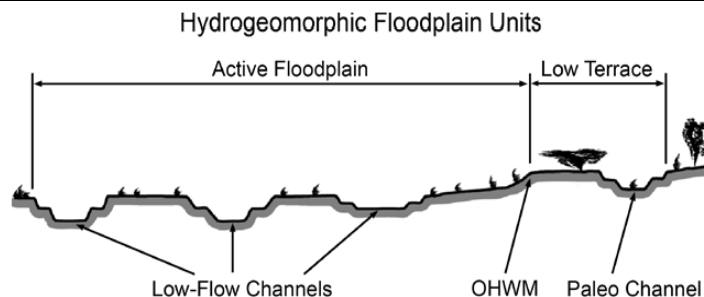
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

### Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> <u>15-1x</u>		<b>Feature ID:</b> <u>D12-1x</u>		<b>Date:</b> <u>3/10/2020</u>	
<b>Project:</b> <u>Zayo Fibo optic</u>					
<b>Location:</b> <u>Modoc County</u>			<b>Photo begin/end file#:</b> <u>See Field Photos</u>		
<b>Investigator(s):</b> <u>T. Kayatski, L. Morris</u>					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> <u>Along highway</u> <b>Projection:</b> <u>Lambert</u> <b>Datum:</b> <u>NAD83</u> <b>Coordinates:</b> <u>41.9342, -120.3199</u>			
<b>Potential anthropogenic influences on the channel system:</b>					

Roadside culvert within ag /grazing lands.

<b>Brief site description:</b>	
Stream bisects PEM wetland from east and flows under highway via culvert. Flows from south to north within PEM for approximately < 30 feet and then continues perpendicularly	
<b>Checklist of resources (if available)</b>	
<input checked="" type="checkbox"/> Aerial photography <b>Dates:</b> _____ <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies	<input type="checkbox"/> Stream gage data <b>Gage number:</b> _____ Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event



#### Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
  - a) Record the floodplain unit and GPS position.
  - b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
  - c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHW M and record the indicators. Record the OHW M position via:

<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS
<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

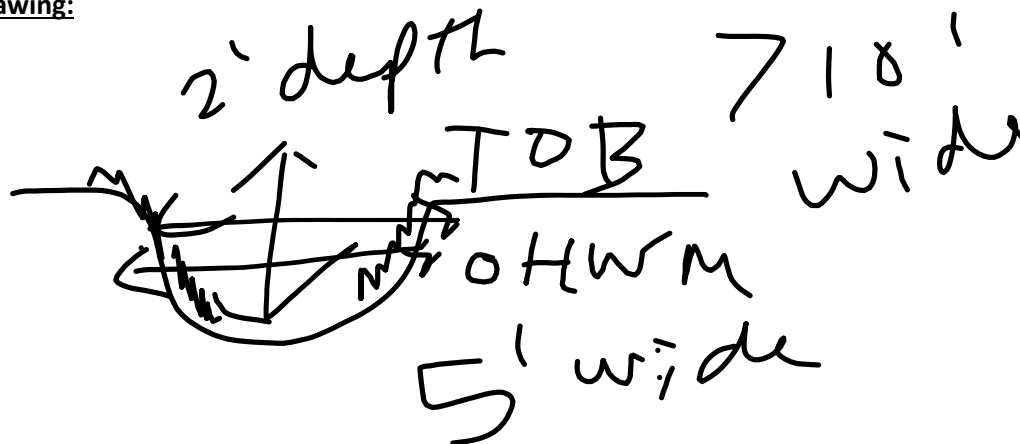


Feature ID: D12-1x

Cross section ID: 1

Date: 3/9/2020

Time: 1:02

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☒ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Scourline and undercutting obscured by vegetation along channel; presence of vegetation both above and below signify PEM wetland; wrackline visible on vegetation.

**Floodplain unit:**☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Medium siltTotal veg cover: 80 % Tree: 0 % Shrub: 45 % Herb: 25 %

Community successional stage:

☐ NA☒ Early (herbaceous & seedlings)☒ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☒ Drift and/or debris☒ Presence of bed and bank☒ Benches☒ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Small bench visible; likely aggradation within channel

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input checked="" type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: <u>3</u> %			
Community successional stage:			
<input type="checkbox"/> NA	<input checked="" type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input checked="" type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input checked="" type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input checked="" type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			
PEM above and below waterline within feature which receives flows both from stream and more so from precipitation.			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

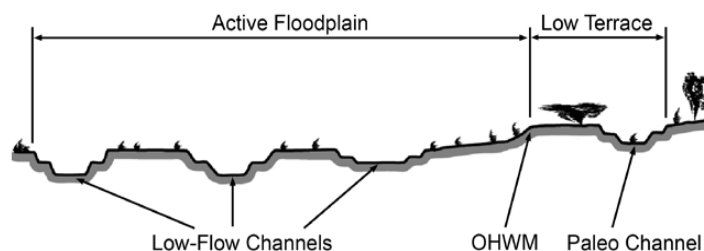
### Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 17-1x		<b>Feature ID:</b> D14-1x		<b>Date:</b> 3/10/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> T. Kayatski, L. Morris					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>		Do normal circumstances exist on the site?		<b>Location Details:</b>	
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>		Is the site significantly disturbed?			
				<b>Projection:</b> Lambert <b>Datum:</b> NAD83	
				<b>Coordinates:</b> 41.9132, -120.3295	
<b>Potential anthropogenic influences on the channel system:</b>					

Stream flows east to west via culvert under highwa ; grazing land west and east

<b>Brief site description:</b>	
Flows from east to west via box culvert; mustard present in streambed (previous years growth)	
<b>Checklist of resources (if available)</b>	
<input checked="" type="checkbox"/> Aerial photography	<input type="checkbox"/> Stream gage data
<b>Dates:</b> _____	<b>Gage number:</b> _____
<input checked="" type="checkbox"/> Topographic maps	Period of record:
<input type="checkbox"/> Geologic maps	<input type="checkbox"/> History of recent effective discharges
<input type="checkbox"/> Vegetation maps	<input type="checkbox"/> Results of flood frequency analysis
<input checked="" type="checkbox"/> Soils maps	<input type="checkbox"/> Most recent shift-adjusted rating
<input type="checkbox"/> Rainfall/precipitation maps	<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event
<input type="checkbox"/> Existing delineation(s) for site	
<input checked="" type="checkbox"/> Global positioning system (GPS)	
<input type="checkbox"/> Other studies	

Hydrogeomorphic Floodplain Units



#### **Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:**

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
  - a) Record the floodplain unit and GPS position.
  - b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
  - c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHW M and record the indicators. Record the OHW M position via:

<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS
<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:



### Wentworth Size Classes

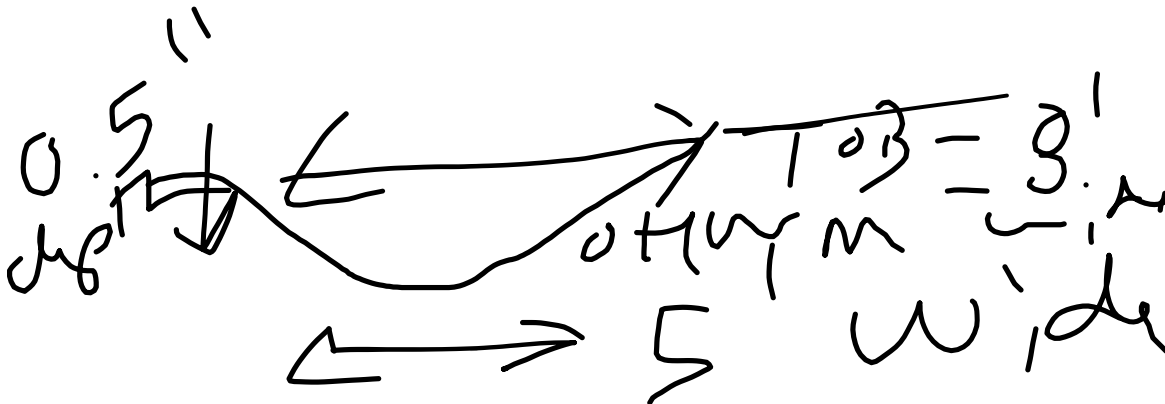
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D14-1x

Cross section ID: 1

Date: 3/10/2020 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Sediment transport visible as flows present during survey; cobbles uncovered/ visible under mustards..

**Floodplain unit:**☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Medium siltTotal veg cover: 4 % Tree: 0 % Shrub: \_\_\_\_\_ % Herb: 4 %

Community successional stage:

☐ NA☒ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☒ Drift and/or debris☒ Presence of bed and bank☐ Benches☒ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Other than dried mustard in channel, streambed devoid of veg.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 6-1	<b>Feature ID:</b> D02-1bx	<b>Date:</b> 3/10/2020
<b>Project:</b> Zayo Fiberoptic		
<b>Location:</b> Modoc County	<b>Photo begin/end file#:</b> See Field Photos	
<b>Investigator(s):</b> T. Kayatski, L. Morris		
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site?	<b>Location Details:</b>	
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		
<b>Projection:</b> Lambert		<b>Datum:</b> NAD83
<b>Coordinates:</b> 41.9106, -120.3308		
<b>Potential anthropogenic influences on the channel system:</b>		

Stream flows east to west under highway via box culvert and beyond fence

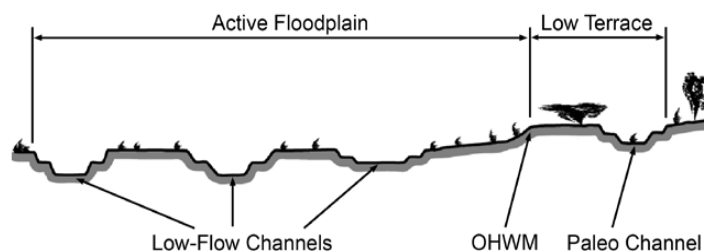
## Brief site description:

Flows from east to west via box culvert; mustard present in streambed (previous years growth) - ...resembling an oxbow curvature. Adjacent to grazing land.

## Checklist of resources (if available)

<input checked="" type="checkbox"/> Aerial photography	<input type="checkbox"/> Stream gage data
<b>Dates:</b> _____	<b>Gage number:</b> _____
<input checked="" type="checkbox"/> Topographic maps	Period of record:
<input type="checkbox"/> Geologic maps	<input type="checkbox"/> History of recent effective discharges
<input type="checkbox"/> Vegetation maps	<input type="checkbox"/> Results of flood frequency analysis
<input checked="" type="checkbox"/> Soils maps	<input type="checkbox"/> Most recent shift-adjusted rating
<input type="checkbox"/> Rainfall/precipitation maps	<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event
<input type="checkbox"/> Existing delineation(s) for site	
<input checked="" type="checkbox"/> Global positioning system (GPS)	
<input type="checkbox"/> Other studies	

## Hydrogeomorphic Floodplain Units



## Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
  - a) Record the floodplain unit and GPS position.
  - b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
  - c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:

<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS
<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:

### Wentworth Size Classes

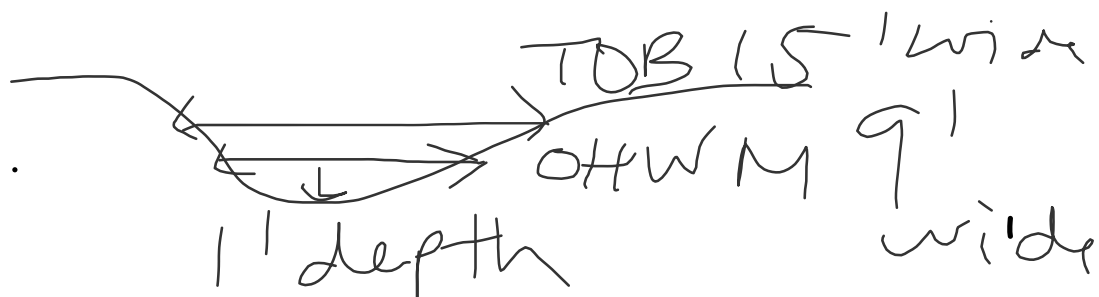
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D02-1bx

Cross section ID: 1

Date: 3/10/2020 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Sediment transport visible as flows present during survey; cobbles uncovered/ visible under mustards..

**Floodplain unit:**☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Medium siltTotal veg cover: 4 % Tree: 0 % Shrub: \_\_\_\_\_ % Herb: 4 %

Community successional stage:

☐ NA☒ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☒ Drift and/or debris☒ Presence of bed and bank☐ Benches☒ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Other than dried mustard in channel, streambed devoid of veg.

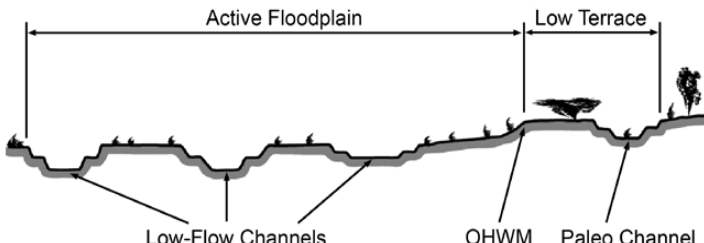
<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

### Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> <u>22-1x</u>		<b>Feature ID:</b> <u>D19-1x</u>		<b>Date:</b> <u>3/10/2020</u>	
<b>Project:</b> <u>Zayo Fiberoptic</u>					
<b>Location:</b> <u>Modoc County</u>			<b>Photo begin/end file#:</b> <u>See Field Photos</u>		
<b>Investigator(s):</b> <u>T. Kayatski, L. Morris</u>					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> <u>Lambert</u> <b>Datum:</b> <u>NAD83</u> <b>Coordinates:</b> <u>41.9022, -120.3347</u>			
<b>Potential anthropogenic influences on the channel system:</b>					
Stream situated at toe of slope in depression along roadside, flows east to southwest					

<b>Brief site description:</b>	
Channel flows east to south across highway via culvert, surrounded by adjacent grazed shrubland; small ponded area at outfall pipe.	
<b>Checklist of resources (if available)</b>	
<input checked="" type="checkbox"/> Aerial photography <b>Dates:</b> _____ <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies	<input type="checkbox"/> Stream gage data <b>Gage number:</b> _____ <b>Period of record:</b> <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

<b>Hydrogeomorphic Floodplain Units</b> 	
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b>	
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <div style="margin-left: 20px;">           a) Record the floodplain unit and GPS position.            b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.            c) Identify any indicators present at the location.         </div> 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer         </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other: _____         </div> </div>	



### Wentworth Size Classes

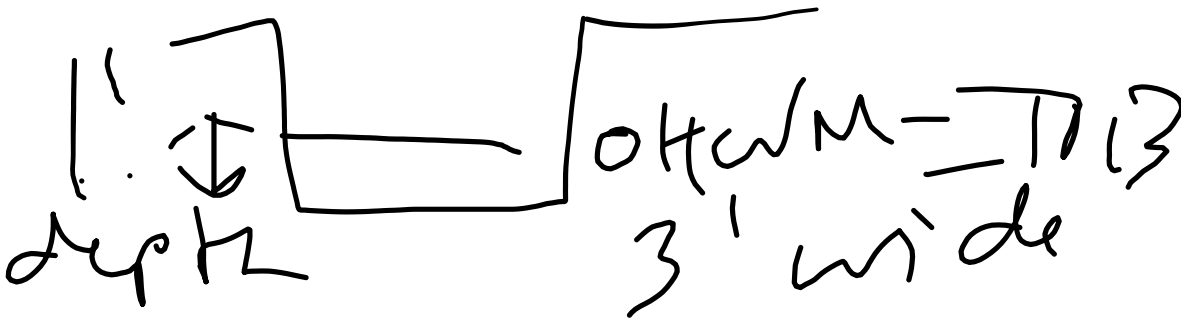
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D19-1x

Cross section ID: 1

Date: 3/10/2020 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species                  | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

**Comments:**

Cobbles and gravels present in scoured channel south west of ponded pool at outfall pump.  
Small (<5% ) vegetation patches within channel.

**Floodplain unit:**☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Gravelly sandy loamTotal veg cover: 3 % Tree: 0 % Shrub: \_\_\_\_\_ % Herb: 3 %

Community successional stage:

- |  |  |
|--|--|
| <input type="checkbox"/> NA  | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input checked="" type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

**Indicators:**

- |  |   |
|--|---|
| <input type="checkbox"/> Mudcracks                           | <input checked="" type="checkbox"/> Soil development  |
| <input type="checkbox"/> Ripples                             | <input type="checkbox"/> Surface relief   |
| <input checked="" type="checkbox"/> Drift and/or debris      | <input checked="" type="checkbox"/> Other: <u>Algal matting in drier area and algae in ponded</u> |
| <input checked="" type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: <u>area.</u>  |
| <input type="checkbox"/> Benches                             | <input type="checkbox"/> Other: _____   |

**Comments:**

Largely scoured and lacking vegetation; gravelly silt.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

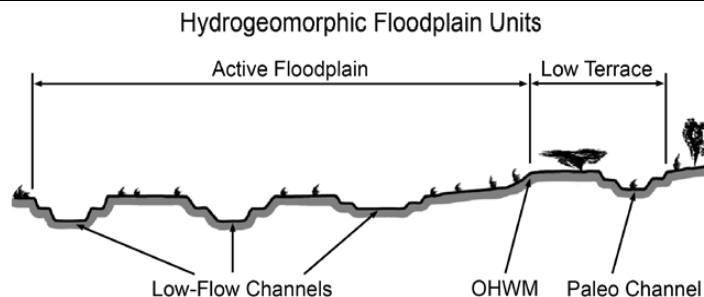
# **Arid West Ephemeral and Intermittent Streams OHW M Datasheet**

<b>Sampling Point:</b> <u>23-1x</u>	<b>Feature ID:</b> <u>D20-1x</u>	<b>Date:</b> <u>3/11/2020</u>
<b>Project:</b> <u>Zayo Fiberoptic</u>		
<b>Location:</b> <u>Modoc County</u>	<b>Photo begin/end file#:</b> <u>See Field Photos</u>	
<b>Investigator(s):</b> <u>T. Kayatski, L. Morris</u>		
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site?	<b>Location Details:</b> <u>Inaccessible; used aerial imagery to review area</u>	
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		
<b>Projection:</b> <u>Lambert</u>		<b>Datum:</b> <u>NAD83</u>
<b>Coordinates:</b> <u>41.8841, -120.3433</u>		
<b>Potential anthropogenic influences on the channel system:</b>		

Large concrete culvert with reinforced RSP

<b>Brief site description:</b>
Perennial stream flowing from east to west at foot of slope; water flowing swiftly at time of survey

<b>Checklist of resources (if available)</b>	
<input checked="" type="checkbox"/> Aerial photography	<input type="checkbox"/> Stream gage data
<b>Dates:</b> _____	<b>Gage number:</b> _____
<input checked="" type="checkbox"/> Topographic maps	Period of record:
<input type="checkbox"/> Geologic maps	<input type="checkbox"/> History of recent effective discharges
<input type="checkbox"/> Vegetation maps	<input type="checkbox"/> Results of flood frequency analysis
<input checked="" type="checkbox"/> Soils maps	<input type="checkbox"/> Most recent shift-adjusted rating
<input type="checkbox"/> Rainfall/precipitation maps	<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event
<input type="checkbox"/> Existing delineation(s) for site	
<input checked="" type="checkbox"/> Global positioning system (GPS)	
<input type="checkbox"/> Other studies	



## **Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:**

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
  - a) Record the floodplain unit and GPS position.
  - b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
  - c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHW M and record the indicators. Record the OHW M position via:

<input checked="" type="checkbox"/> Mapping on aerial photograph	<input type="checkbox"/> GPS
<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D20-1x

Cross section ID: 1

Date: 3/11/2020 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species                  | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

**Comments:**

Boulders, cobbles and gravels present in stream; OHWM evidenced by wrack lines and undercutting visible from roadside. Additional indicators likely present when stream is accessible.

**Floodplain unit:**☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Gravelly sandy loamTotal veg cover: \_\_\_\_\_ % Tree: 0 % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> NA                  | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

**Indicators:**

- |  |   |
|--|---|
| <input type="checkbox"/> Mudcracks                           | <input type="checkbox"/> Soil development |
| <input checked="" type="checkbox"/> Ripples                  | <input type="checkbox"/> Surface relief   |
| <input checked="" type="checkbox"/> Drift and/or debris      | <input type="checkbox"/> Other: _____     |
| <input checked="" type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____     |
| <input type="checkbox"/> Benches                             | <input type="checkbox"/> Other: _____     |

**Comments:**

Scouting visible and boulders present in low flow channel

Feature ID: D20-1x

Cross section ID:

Date: 3/11/2020 Time:

Floodplain unit:

☐ Low-Flow Channel

☒ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: Estimated gravelly sandy loam

Total veg cover: 60 % Tree: \_\_\_\_\_ % Shrub: 50 % Herb: 10 %

Community successional stage:

☐ NA

☒ Mid (herbaceous, shrubs, saplings)

☒ Early (herbaceous & seedlings)

☐ Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐ Mudcracks

☒ Soil development

☐ Ripples

☒ Surface relief

☒ Drift and/or debris

☒ Other: Scour

☐ Presence of bed and bank

☐ Other: \_\_\_\_\_

☒ Benches

☐ Other: \_\_\_\_\_

**Comments:**

Adjacent riparian wetland stringer along active channel with fair amount of herbaceous vegetation beneath shrubs ( rose and willow)

Floodplain unit:

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA

☐ Mid (herbaceous, shrubs, saplings)

☐ Early (herbaceous & seedlings)

☐ Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐ Mudcracks

☐ Soil development

☐ Ripples

☐ Surface relief

☐ Drift and/or debris

☐ Other: \_\_\_\_\_

☐ Presence of bed and bank

☐ Other: \_\_\_\_\_

☐ Benches

☐ Other: \_\_\_\_\_

**Comments:**

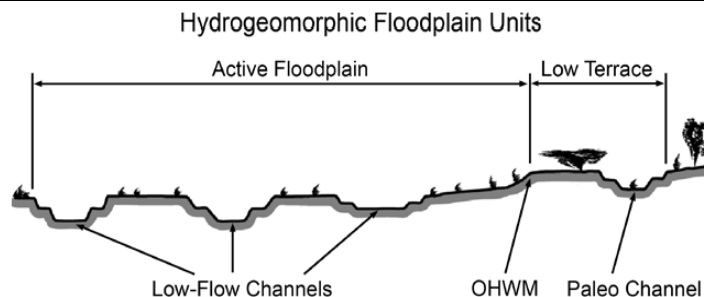
### Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> <u>24-1x</u>		<b>Feature ID:</b> <u>D21-1x</u>		<b>Date:</b> <u>3/11/2020</u>	
<b>Project:</b> <u>Zayo Fiberoptic</u>					
<b>Location:</b> <u>Modoc County</u>			<b>Photo begin/end file#:</b> <u>See Field Photos</u>		
<b>Investigator(s):</b> <u>T. Kayatski, L. Morris</u>					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> <u>Lambert</u> <b>Datum:</b> <u>NAD83</u> <b>Coordinates:</b> <u>41.8770, -120.3454</u>			
<b>Potential anthropogenic influences on the channel system:</b>					
Road prism and adjacent grazing regime.					

**Brief site description:**  
Perennial stream flowing from SE to NW via culvert under highway; Swift flows present.

**Checklist of resources (if available)**

<input checked="" type="checkbox"/> Aerial photography	<input type="checkbox"/> Stream gage data
<b>Dates:</b> _____	<b>Gage number:</b> _____
<input checked="" type="checkbox"/> Topographic maps	Period of record: _____
<input type="checkbox"/> Geologic maps	<input type="checkbox"/> History of recent effective discharges
<input type="checkbox"/> Vegetation maps	<input type="checkbox"/> Results of flood frequency analysis
<input checked="" type="checkbox"/> Soils maps	<input type="checkbox"/> Most recent shift-adjusted rating
<input type="checkbox"/> Rainfall/precipitation maps	<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event
<input type="checkbox"/> Existing delineation(s) for site	
<input checked="" type="checkbox"/> Global positioning system (GPS)	
<input type="checkbox"/> Other studies	



**Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:**

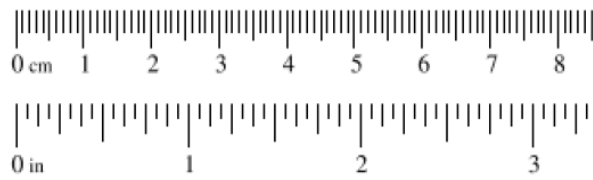
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
  - a) Record the floodplain unit and GPS position.
  - b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
  - c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHW M and record the indicators. Record the OHW M position via:

<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS
<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:



### Wentworth Size Classes

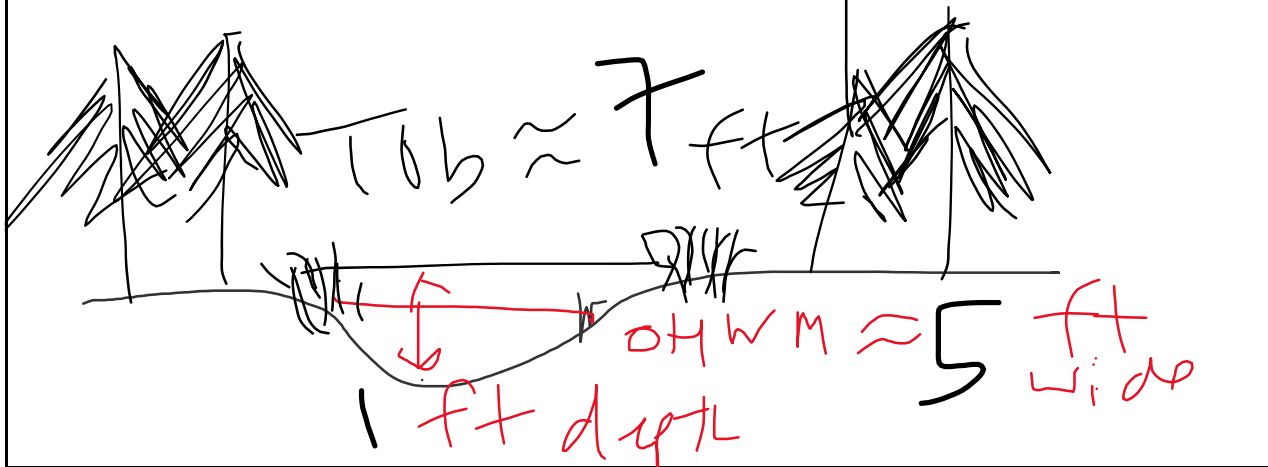
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D21-1x

Cross section ID:

Date: 3/11/2020 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Boulders, cobbles and gravels present in stream; OHWM evidenced by wrack lines and undercutting, line impressed on bank.

**Floodplain unit:**☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: Gravelly sandy loam

Total veg cover: \_\_\_\_\_ % Tree: 0 % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☒ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☒ Ripples☒ Drift and/or debris☒ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Scour visible and boulders present in low flow channel

Feature ID: D21-1x

Cross section ID:

Date: 3/11/2020 Time:

Floodplain unit:

☐ Low-Flow Channel

☒ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: Estimated gravelly sandy loam

Total veg cover: 40 % Tree: \_\_\_\_\_ % Shrub: 5 % Herb: 30 %

Community successional stage:

☐ NA

☒ Early (herbaceous & seedlings)

☒ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐ Mudcracks

☐ Ripples

☒ Drift and/or debris

☐ Presence of bed and bank

☒ Benches

☒ Soil development

☒ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

**Comments:**

Adjacent riparian vegetated stringer along active channel with fair amount of herbaceous vegetation beneath shrubs ( rose and willow).

Floodplain unit:

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☐ Presence of bed and bank

☐ Benches

☐ Soil development

☐ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

**Comments:**

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 26-1x	<b>Feature ID:</b> D22-1x	<b>Date:</b> 3/11/2020
<b>Project:</b> Zayo Fiberoptic		
<b>Location:</b> Modoc County	<b>Photo begin/end file#:</b> See Field Photos	
<b>Investigator(s):</b> T. Kayatski, L. Morris		
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site?	<b>Location Details:</b>	
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		
<b>Projection:</b> Lambert		<b>Datum:</b> NAD83
<b>Coordinates:</b> 41.8760, -120.3457		
<b>Potential anthropogenic influences on the channel system:</b>		

Road prism and adjacent grazing regime.

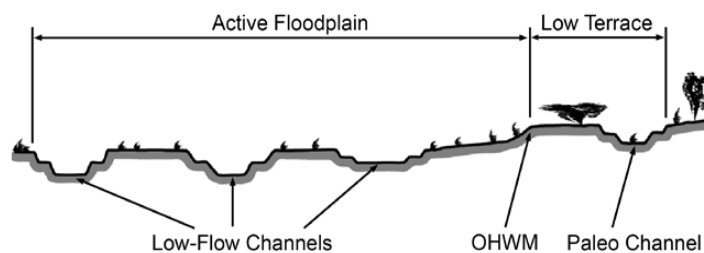
## Brief site description:

Small pond situated at toe slope of road; aquatic macroinvertebrates present.

## Checklist of resources (if available)

<input checked="" type="checkbox"/> Aerial photography	<input type="checkbox"/> Stream gage data
<b>Dates:</b> _____	<b>Gage number:</b> _____
<input checked="" type="checkbox"/> Topographic maps	Period of record: _____
<input type="checkbox"/> Geologic maps	<input type="checkbox"/> History of recent effective discharges
<input type="checkbox"/> Vegetation maps	<input type="checkbox"/> Results of flood frequency analysis
<input checked="" type="checkbox"/> Soils maps	<input type="checkbox"/> Most recent shift-adjusted rating
<input type="checkbox"/> Rainfall/precipitation maps	<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event
<input type="checkbox"/> Existing delineation(s) for site	
<input checked="" type="checkbox"/> Global positioning system (GPS)	
<input type="checkbox"/> Other studies	

## Hydrogeomorphic Floodplain Units



## Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
  - a) Record the floodplain unit and GPS position.
  - b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
  - c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHW M and record the indicators. Record the OHW M position via:

<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS
<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



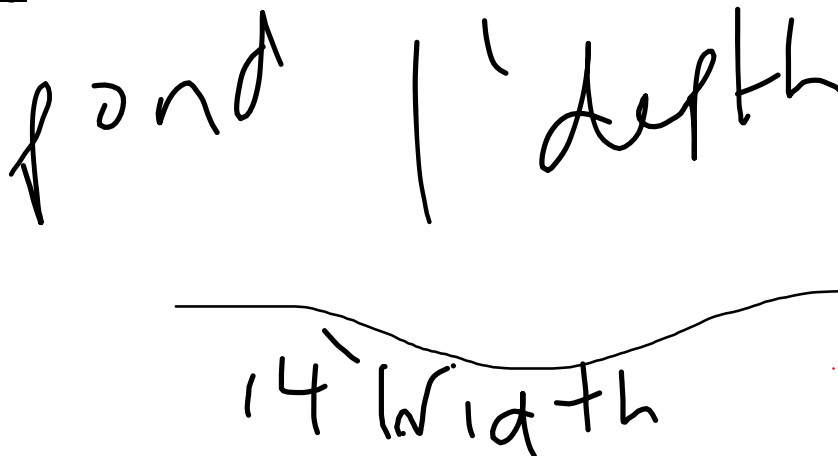
Feature ID: D22-1x

Cross section ID:

Date: 3/11/2020 Time:

Cross section drawing:

pond 1' depth  
14' width



OHWM

GPS point: \_\_\_\_\_

**Indicators:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species                  | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

**Comments:**

Small pond lacking > 5% hydrophytic vegetation; however some submerged vegetation present.

Floodplain unit:

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: 0 % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> NA                  | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

**Indicators:**

- |   |  |
|---|--|
| <input type="checkbox"/> Mudcracks                      | <input type="checkbox"/> Soil development              |
| <input type="checkbox"/> Ripples                        | <input type="checkbox"/> Surface relief                |
| <input checked="" type="checkbox"/> Drift and/or debris | <input checked="" type="checkbox"/> Other: Scour marks |
| <input type="checkbox"/> Presence of bed and bank       | <input type="checkbox"/> Other: _____                  |
| <input type="checkbox"/> Benches                        | <input type="checkbox"/> Other: _____                  |

**Comments:**

NA (OHWM of pond indicated by scour mark on bank)

Feature ID: D22-1x

Cross section ID:

Date: 3/11/2020 Time:

**Floodplain unit:**

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

**GPS point:** \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☐ Presence of bed and bank

☐ Benches

☐ Soil development

☐ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

**Comments:**

**Floodplain unit:**

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

**GPS point:** \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☐ Presence of bed and bank

☐ Benches

☐ Soil development

☐ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

**Comments:**

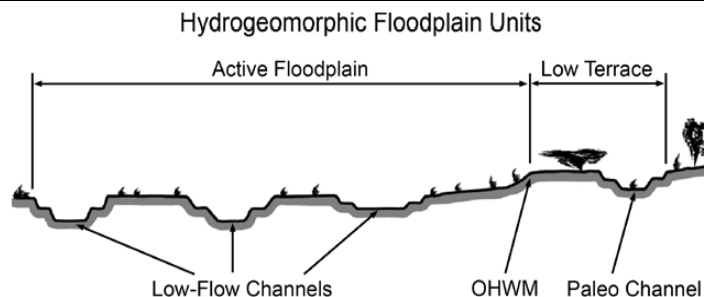
### Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 30-1x		<b>Feature ID:</b> D24-1x		<b>Date:</b> 3/11/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> T. Kayatski, L. Morris					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.8656, -120.3497			
<b>Potential anthropogenic influences on the channel system:</b> Road prism and adjacent grazing regime.					

**Brief site description:**  
 Intermittent stream flowing east to east via pipe drain under highway

**Checklist of resources (if available)**

<input checked="" type="checkbox"/> Aerial photography	<input type="checkbox"/> Stream gage data
<b>Dates:</b> _____	<b>Gage number:</b> _____
<input checked="" type="checkbox"/> Topographic maps	Period of record:
<input type="checkbox"/> Geologic maps	<input type="checkbox"/> History of recent effective discharges
<input type="checkbox"/> Vegetation maps	<input type="checkbox"/> Results of flood frequency analysis
<input checked="" type="checkbox"/> Soils maps	<input type="checkbox"/> Most recent shift-adjusted rating
<input type="checkbox"/> Rainfall/precipitation maps	<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event
<input type="checkbox"/> Existing delineation(s) for site	
<input checked="" type="checkbox"/> Global positioning system (GPS)	
<input type="checkbox"/> Other studies	



**Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:**

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
  - a) Record the floodplain unit and GPS position.
  - b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
  - c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:

<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS
<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D24-1x

Cross section ID: 1

Date: 3/11/2020 Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☒ Other: Undercutting☐ Other: \_\_\_\_\_**Comments:**

Small drainage with bed and bank evidenced by change in sediment texture, destruction of vegetation and undercutting

**Floodplain unit:**☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: 0 \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☒ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☒ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☒ Other: Undercutting☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

No floodplain associated within small incised stream

Feature ID: D24-1x

Cross section ID:

Date: 3/11/2020 Time:

**Floodplain unit:**

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

**GPS point:** \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☒ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☐ Presence of bed and bank

☐ Benches

☐ Soil development

☐ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

**Comments:**

No associated floodplain.

**Floodplain unit:**

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

**GPS point:** \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☒ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☐ Presence of bed and bank

☐ Benches

☐ Soil development

☐ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

**Comments:**

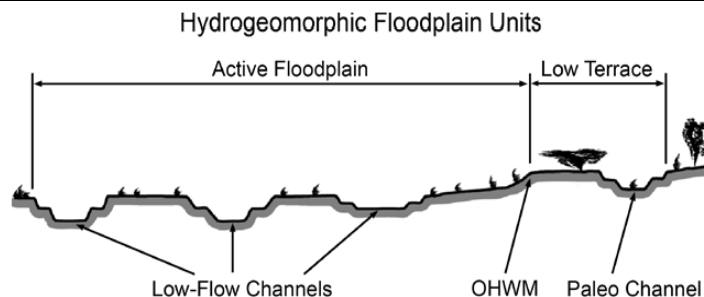
### Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 32-1x		<b>Feature ID:</b> D26-1x		<b>Date:</b> 3/11/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> T. Kayatski, L. Morris					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b> Inaccessible, accessed from Road.		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.8378, -120.3588		
<b>Potential anthropogenic influences on the channel system:</b>					
Road prism and adjacent grazing regime.					

**Brief site description:**  
Intermittent stream flows west via culvert at toe slope of highly stepped terrain; flowing water

**Checklist of resources (if available)**

<input checked="" type="checkbox"/> Aerial photography	<input type="checkbox"/> Stream gage data
<b>Dates:</b> _____	<b>Gage number:</b> _____
<input checked="" type="checkbox"/> Topographic maps	Period of record: _____
<input type="checkbox"/> Geologic maps	<input type="checkbox"/> History of recent effective discharges
<input type="checkbox"/> Vegetation maps	<input type="checkbox"/> Results of flood frequency analysis
<input checked="" type="checkbox"/> Soils maps	<input type="checkbox"/> Most recent shift-adjusted rating
<input type="checkbox"/> Rainfall/precipitation maps	<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event
<input type="checkbox"/> Existing delineation(s) for site	
<input checked="" type="checkbox"/> Global positioning system (GPS)	
<input type="checkbox"/> Other studies	



**Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:**

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
  - a) Record the floodplain unit and GPS position.
  - b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
  - c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:

<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS
<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:

### Wentworth Size Classes

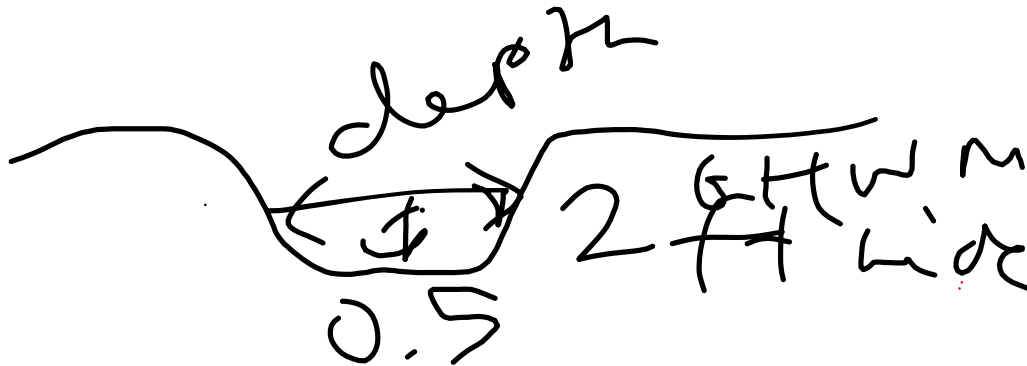
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D26-1x

Cross section ID: 1

Date: 3/11/2020 Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☒ Other: wrack lines☐ Other: \_\_\_\_\_Comments:

Cobbles and gravels present in stream; OHWM evidenced by wrack lines and line impressed on bank.

Floodplain unit:☒ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: Gravelly sandy loamTotal veg cover: 15 % Tree: 0 % Shrub: \_\_\_\_\_ % Herb: 15 %

Community successional stage:

☐ NA☒ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☒ Drift and/or debris☒ Presence of bed and bank☐ Benches☒ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Scour visible and cobbles present in low flow channel.

Feature ID: D26-1x

Cross section ID:

Date: 3/11/2020 Time:

**Floodplain unit:**

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

**GPS point:** \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☒ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☐ Presence of bed and bank

☐ Benches

☐ Soil development

☐ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

**Comments:**

**Floodplain unit:**

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

**GPS point:** \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☐ Presence of bed and bank

☐ Benches

☐ Soil development

☐ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

**Comments:**

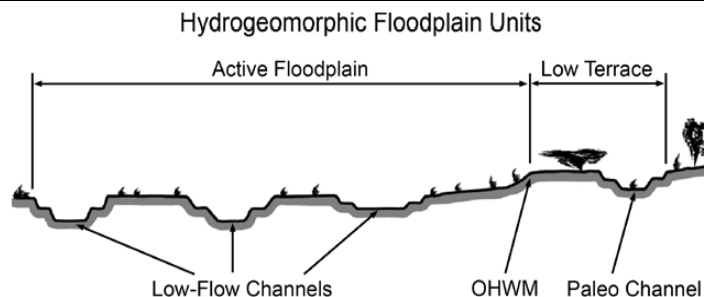
### Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 33-1x		<b>Feature ID:</b> D27-1x		<b>Date:</b> 3/11/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> T. Kayatski, L. Morris					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.8281, -120.3536			
<b>Potential anthropogenic influences on the channel system:</b> Road prism and adjacent grazing regime.					

**Brief site description:**  
 Highly stepped intermittent stream flowing west via culvert under highway; flows present at survey.

**Checklist of resources (if available)**

<input checked="" type="checkbox"/> Aerial photography	<input type="checkbox"/> Stream gage data
<b>Dates:</b> _____	<b>Gage number:</b> _____
<input checked="" type="checkbox"/> Topographic maps	Period of record:
<input type="checkbox"/> Geologic maps	<input type="checkbox"/> History of recent effective discharges
<input type="checkbox"/> Vegetation maps	<input type="checkbox"/> Results of flood frequency analysis
<input checked="" type="checkbox"/> Soils maps	<input type="checkbox"/> Most recent shift-adjusted rating
<input type="checkbox"/> Rainfall/precipitation maps	<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event
<input type="checkbox"/> Existing delineation(s) for site	
<input checked="" type="checkbox"/> Global positioning system (GPS)	
<input type="checkbox"/> Other studies	



**Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:**

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
  - a) Record the floodplain unit and GPS position.
  - b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
  - c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:

<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS
<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:



### Wentworth Size Classes

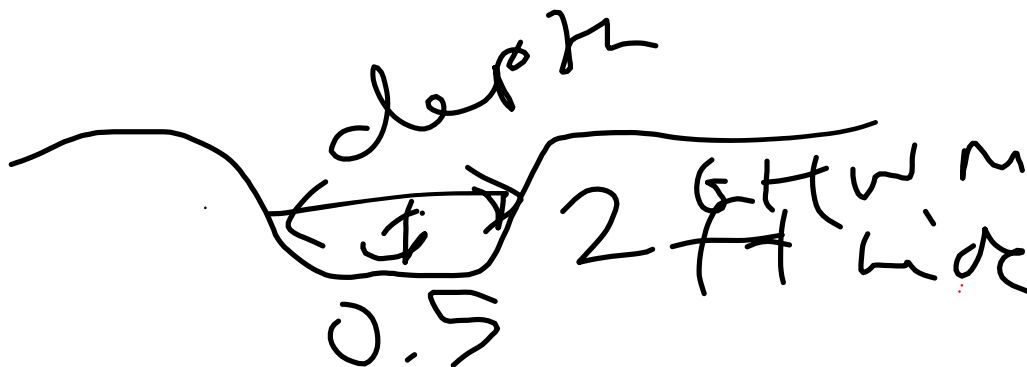
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D27-1x

Cross section ID:

Date: 3/11/2020 Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

Comments:

Cobbles and gravels present in stream; OHWM evidenced by debris drift and line impressed on rocks

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:

Average sediment texture: Gravelly sandy loam

Total veg cover: 80 % Tree: 5 % Shrub: 55 % Herb: 25 %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

Indicators:

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

Comments:

Boulders and cobbles present in low flow channel. Highly stepped under Juniperus occidentalis and Salix spp.

Feature ID: D27-1x

Cross section ID:

Date: 3/11/2020 Time:

**Floodplain unit:**

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

**GPS point:** \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☒ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☐ Presence of bed and bank

☐ Benches

☐ Soil development

☐ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

**Comments:**

**Floodplain unit:**

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

**GPS point:** \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☒ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☐ Presence of bed and bank

☐ Benches

☐ Soil development

☐ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

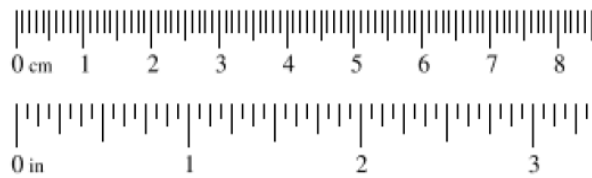
**Comments:**

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 50-1		<b>Feature ID:</b> D50-1bx		<b>Date:</b> 3/9/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> B. Cohen, M. Oats, L. Morris, T. Kayatski					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b>		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 49.9914, -120.2982		
<b>Potential anthropogenic influences on the channel system:</b> Box culvert, riprap, levee/bermed sides					
<b>Brief site description:</b> Intermittent stream flowing west under road; cobble bottom					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> _____		<b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and			
<input type="checkbox"/> Existing delineation(s) for site		the most recent event exceeding a 5-year event			
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

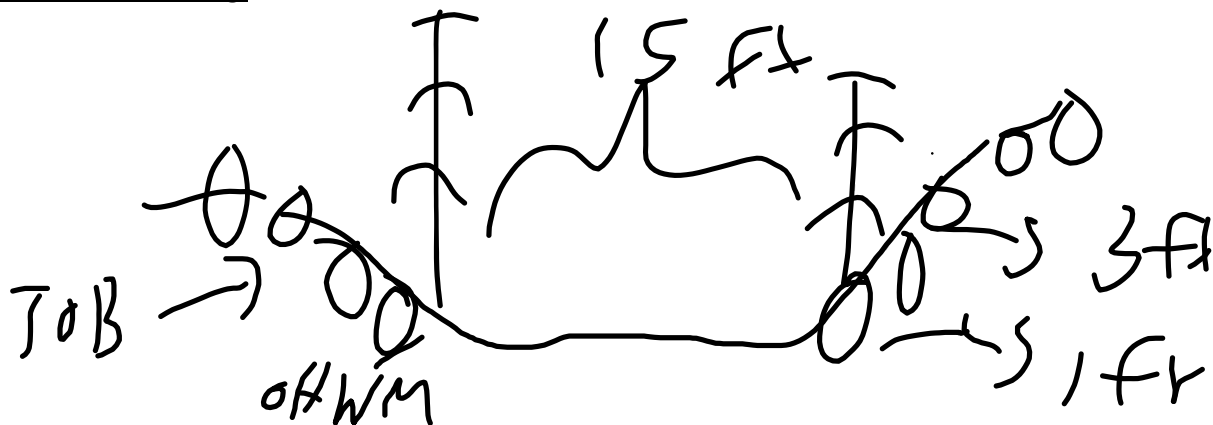


Feature ID: D01-1x

Cross section ID:

Date:

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☒ Other: Drift deposits☒ Other: Headcut/nickpoint**Comments:**Floodplain unit:☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

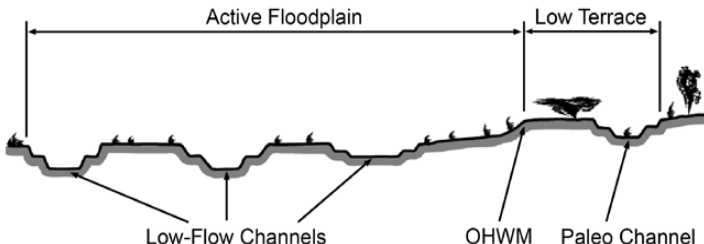
Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 51-1		<b>Feature ID:</b> D51-1bx		<b>Date:</b> 3/9/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen, L. Morris, T. Kayatski					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.9812, -120.2984			
<b>Potential anthropogenic influences on the channel system:</b> Near highway					
<b>Brief site description:</b> Stream runs through culvert, under highway					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div style="width: 45%;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

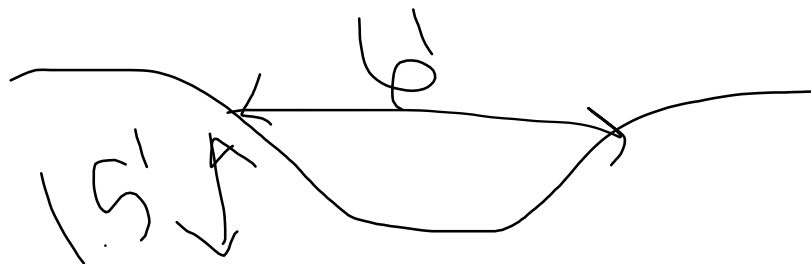


Feature ID: D02-1x

Cross section ID: 1

Date: 3/9/2020

Time: 1:02

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☒ Other: Sediment deposits, drift, wrack☐ Other: \_\_\_\_\_**Comments:**

Water present at time of survey (intermittent) flowing with no riparian vegetation.  
Intermittent stream goes through culvert flowing under highway.

**Floodplain unit:**☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 3-1x Feature ID: W01-1x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/9/2020  
 Investigator(s): B. Cohen, L. Morris, M. Oats, T. Kayatski Section, Township, Range: 25, 48N, 14E  
 Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): D Lat: 41.9725 Long: -120.3022 Datum: NAD 83  
 Soil Map Unit Name: Donica Gravelly Clay Loam, 2 to 9 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No       
 Is the Sampled Area within a Wetland? Yes x No     

Remarks: Hydric soils are problematic (see below), hydrology and hydrophytic vegetation present.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: 30')	% Cover	Species?	Status
1 Alnvir	Alnus viridis	60	YES	FACW
2				
3				
4				
		60	= Total Cover	
Sapling/Shrub Stratum	(Plot size: 15')			
1 Roscal	Rosa californica	20	YES	FAC
2				
3				
4				
5				
		20	= Total Cover	
Herb Stratum	(Plot size: 5')			
1 Conmac	Conium maculatum	10	NO	FACW
2 Elytra	Elymus trachycaulus	65	YES	FACU
3				
4				
5				
6				
7				
8				
9				
10				
11				
		75	= Total Cover	
Woody Vine Stratum	(Plot size: )			
1				
2				
		0	= Total Cover	

%Bare Ground in Herb Stratum: 5 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)  
 Total Number of Dominant Species Across All Strata: 3 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>70</u>	x 2 = <u>140</u>
FAC species <u>20</u>	x 3 = <u>60</u>
FACU species <u>65</u>	x 4 = <u>260</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>155</u> (A)	<u>460</u> (B)
Prevalence Index = B/A = <u>2.9677</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Hydrophytic vegetation indicators observed throughout the sample area. Sample area passes Dominance test and Prevalence index for hydrophytic vegetation.

SOIL							Sampling Point:	3-1x
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 3/1	100					Clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input checked="" type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)					
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)					
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b> Type: _____ None Depth (inches): _____ 16"						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Soil is assumed hydric and therefore problematic. Soil has a dark matrix color and is adjacent to a highway with gravel fill. The area has active grazed ranch land and agriculture. These factors may affect the soils sufficiently to mask hydric soil. The depression landscape position with drainage patterns and drift deposits shows this location has Seasonally Pondered Soils (Char. 5 Problematic).								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)						Secondary Indicators (2 or more required)		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input checked="" type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input checked="" type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicators observed at the site; as one primary indicator (nonriverine drift deposits) and one secondary indicator (drainage patterns) were observed in the area.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 4-1x Feature ID: U1-1x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/9/2020  
 Investigator(s): M. Oats, B. Cohen, L. Morris, T. Kayatski Section, Township, Range: 25, 48N, 14E  
 Local relief (hillside, terrace, etc.): Valley floor Local Relief (concave, convex, none): None Slope (%): 2  
 Subregion (LRR): D Lat: 41.9725 Long: -120.3022 Datum: NAD 83  
 Soil Map Unit Name: Donica Gravelly Clay Loam, 2 to 9 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W1-1x, all three wetland parameters were absent.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: <u>30' radius</u> )	% Cover	Species?	Status
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum	(Plot size: <u>15' radius</u> )			
1	<u>Roscal</u>	<u>Rosa californica</u>	<u>10</u>	<u>YES</u> <u>FAC</u>
2				
3				
4				
5				
		<u>10</u>	= Total Cover	

Herb Stratum	(Plot size: <u>5' radius</u> )			
1	<u>Elytra</u>	<u>Elymus trachycaulus</u>	<u>85</u>	<u>YES</u> <u>FACU</u>
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>85</u>	= Total Cover	

Woody Vine Stratum	(Plot size: <u>30' radius</u> )			
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 1 (A)  
  
 Total Number of Dominant  
Species Across All Strata: 2 (B)  
  
 Percent of Dominant Species  
That Are OBL, FACW, or FAC: 50% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>10</u>	x 3 = <u>30</u>
FACU species <u>85</u>	x 4 = <u>340</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>95</u> (A)	<u>370</u> (B)
Prevalence Index = B/A = <u>3.8947</u>	

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation  
Present?

Yes      No X

Remarks: Hydrophytic vegetation was not dominant at upland point.

SOIL							Sampling Point: 4-1x	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 3/2	100					Clay loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
--	---	--

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?**  
 Yes ☐ No ☒

**Remarks:** Hydric soil indicators were not observed.

**HYDROLOGY**

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)		
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**  
 Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes ☐ No ☒ Depth (inches): 0  
 (includes capillary fringe)

**Wetland Hydrology Present?**  
 Yes ☐ No ☒

**Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:** Hydrology indicators were not observed.

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Feature ID: W2-1x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/11/2020  
 Investigator(s): T. Kayatski, L. Morris Section, Township, Range: 47N, 14E, 34  
 Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): D Lat: 41.8724 Long: -120.3472 Datum: NAD 83  
 Soil Map Unit Name: Bieber Gravelly Loam, 0 to 9 percent slopes NWI classification: Seasonal wetland  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No       
 Is the Sampled Area within a Wetland? Yes x No     

Remarks: All three wetland parameters were met at sample point 27-1x. Seasonal wetland near edge of property with obvious change in vegetation and matted surface. Marginal soils at the edge of wetland boundary.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		0	= Total Cover	
Herb Stratum	(Plot size: 2 m radius _____)			
1	Allspe Allium Sp.	6	NO	FAC
2	unk Unknown	30	YES	FAC
3	pogunk pogagenium sp.	_____	NO	FAC
4	unk Unknown	_____	NO	FAC
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		36	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 65 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of: Multiply by:  
 OBL species 0 x 1 = 0  
 FACW species 0 x 2 = 0  
 FAC species 36 x 3 = 108  
 FACU species 0 x 4 = 0  
 UPL species 0 x 5 = 0  
 Column Totals: 36 (A) 108 (B)  
 Prevalence Index = B/A = 3

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: 3 unknown plants.



SOIL							Sampling Point: 27-1x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10 YR 3/2	100						
8-16	10 YR 3/2	98	10 YR 4/6	2	C	M		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input checked="" type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Soil nearly meets indicator F6 for redox dark surface. Matrix color meets value and chroma requirements (3/2 or less) and does show redox features through prominent redox concentrations in the matrix. However, there are only 2% prominent redox concentrations instead of 5, however soil is assumed hydric due to the presence of these hydric soil features and the feature is dominated by hydrophytic vegetation and has primary hydrology.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)						Secondary Indicators (2 or more required)		
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input checked="" type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 8 (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>  								
<b>Remarks:</b> Saturation was observed within 10 inches of the soil surface, and surface soil cracks were observed meeting wetland hydrology.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Feature ID: U2-1x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 3/11/2020  
 Investigator(s): T. Kayatski, L. Morris Section, Township, Range: 47N, 14E, 34  
 Local relief (hillside, terrace, etc.): Flat Local Relief (concave, convex, none): Concave Slope (%): 3  
 Subregion (LRR): D Lat: 41.8724 Long: -120.3472 Datum: NAD 83  
 Soil Map Unit Name: Bieber Gravelly Loam, 0 to 9 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to seasonal wetland did not have any wetland parameters met.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>	= Total Cover	

Herb Stratum (Plot size: <u>2 m radius</u> )				
1 <u>Elycap</u>	<u>Elymus captures-medusae</u>	<u>50</u>	<u>YES</u>	<u>UPL</u>
2 <u>Brohor</u>	<u>Bromus hordeaceus</u>	<u>30</u>	<u>YES</u>	<u>FACU</u>
3 <u>Poapra</u>	<u>Poa pratensis</u>	<u>10</u>	<u>NO</u>	<u>FAC</u>
4 <u>Elyely</u>	<u>Elymus elymoides</u>	<u>10</u>	<u>NO</u>	<u>FACU</u>
5 <u>allspe</u>	<u>Allium Sp.</u>	<u>1</u>	<u>NO</u>	<u>FAC</u>
6				
7				
8				
9				
10				
11				
		<u>101</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum:      % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant  
Species Across All Strata: 2 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>11</u>	x 3 = <u>33</u>
FACU species <u>40</u>	x 4 = <u>160</u>
UPL species <u>50</u>	x 5 = <u>250</u>
Column Totals: <u>101</u> (A)	<u>443</u> (B)
Prevalence Index = B/A = <u>4.3861</u>	

### Hydrophytic Vegetation Indicators:

No 1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation  
Present?

Yes      No X

Remarks: Area was dominated by upland vegetation.

SOIL							Sampling Point: 28-1x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10 YR 2/2	100						
8-16	10 YR 3/2	100						
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____					<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
<b>Remarks:</b> Hydric soil indicators were not observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>			
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )				
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )				
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )				
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)				
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Wetland hydrology indicators were not observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 36-1 Feature ID: W3-1x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/12/2020  
 Investigator(s): L. Morris, T. Kayatski Section, Township, Range: 46N, 14E, 21  
 Local relief (hillside, terrace, etc.): Wetland swale Local Relief (concave, convex, none): Concave Slope (%): 3  
 Subregion (LRR): D Lat: 41.8134 Long: -120.3549 Datum: NAD 83  
 Soil Map Unit Name: Kinkel Loam, 2 to 15 percent slopes NWI classification: Riparian wetland/ FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No       
 Is the Sampled Area within a Wetland? Yes x No     

Remarks: Wetland swale sourced from culvert outfall conveying flows linearly east to southwest beyond property fence. Burn piles observed within survey area during March 2020 surveys suggesting significant recent disturbance. Under normal circumstances unburned area may have been a more robust shrub wetland.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>2 m radius</u> )				
1 <u>Viospp</u>	<u>Viola spp.</u>	<u>3</u>	<u>NO</u>	<u>FACW</u>
2 <u>Cypera</u>	<u>Cyperus eragrostis</u>	<u>18</u>	<u>YES</u>	<u>FACW</u>
3 <u>Junspp</u>	<u>Juncus spp.</u>	<u>6</u>	<u>YES</u>	<u>FACW</u>
4				
5				
6				
7				
8				
9				
10				
11				
		<u>27</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 73 % Cover of Biotic Crust:     

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>27</u>	x 2 =	<u>54</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>27</u> (A)		<u>54</u> (B)
Prevalence Index = B/A = <u>2</u>		

## Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Hydrophytic plants dominant. Bare ground was a mixture of soil and water. Sample area dominated by FACW vegetation.

SOIL							Sampling Point: 36-1	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10 YR 3/2	100						
8-12	10 YR 4/2	98	7.5 YR 3/4	2	C	M	Silty loam	Distinct Redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input checked="" type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: <u>Rocky boulders</u>								
Depth (inches): <u>12</u>						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Hydric soil indicators observed through indicator F3 (depleted matrix) with a matrix value of 4 or more and a chroma of 2 or less in a layer that begins less than 10 inches from the soil surface and is at least 6 inches thick. Distinct redox concentrations in the matrix are present.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input checked="" type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input checked="" type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>0</u>						
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>7</u>						
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>1</u>		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Primary hydrology observed through surface water and saturation and water table observed within 12 inches of the soil surface. Secondary indicators observed include FAC-neutral test and saturation visible on aerial imagery, meeting wetland hydrology.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 37-1x Feature ID: U3-1x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/12/2020  
 Investigator(s): L. Morris, T. Kayatski Section, Township, Range: 46N, 14E, 21  
 Local relief (hillside, terrace, etc.): Roadside Local Relief (concave, convex, none): Convex Slope (%): 3  
 Subregion (LRR): D Lat: 41.8134 Long: -120.3549 Datum: NAD 83  
 Soil Map Unit Name: Kinkel Loam, 2 to 15 percent slopes NWI classification: Riparian wetland/ FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes      No x  
 Wetland Hydrology Present? Yes      No x  
 Is the Sampled Area within a Wetland? Yes      No X

Remarks: Upland pair point to wetland swale. Area appears significantly disturbed due to burn piles. However hydrophytic vegetation still identifiable. Area confirmed as upland where both hydrology and soils did not meet wetland criteria.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: <u>30 ft radius</u> )				
1 Roscal	Rosa californica	8	YES	FAC
2				
3				
4				
5				
		<u>8</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>2 m radius</u> )				
1 Poapra	Poa pratensis	45	YES	FAC
2 Vertha	Verbascum thapsus	3	NO	FACU
3 Tridub	Trifolium dubium	3	NO	UPL
4				
5				
6				
7				
8				
9				
10				
11				
		<u>51</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 50 % Cover of Biotic Crust:     

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>53</u>	x 3 =	<u>159</u>
FACU species <u>3</u>	x 4 =	<u>12</u>
UPL species <u>3</u>	x 5 =	<u>15</u>
Column Totals: <u>59</u> (A)		<u>186</u> (B)
Prevalence Index = B/A =		<u>3.1525</u>

## Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Hydrophytic vegetation dominated upland point.

SOIL							Sampling Point: 37-1x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	10 YR 2/2	100					Silty loam	
3-16	10 YR 2/2	100					Gravelly loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Hydric soil indicators were not observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Wetland hydrology indicators were not observed..								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 40-1x Feature ID: W5-1x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/12/2020  
 Investigator(s): L. Morris, T. Kayatski Section, Township, Range: 46N, 14E, 28  
 Local relief (hillside, terrace, etc.): Wetland swale Local Relief (concave, convex, none): Concave Slope (%): 3  
 Subregion (LRR): D Lat: 41.7948 Long: -120.3676 Datum: NAD 83  
 Soil Map Unit Name: Pit Silty Clay Loam, 0 to 2 percent slopes NWI classification: FEW/Seasonal Wetland  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

**Remarks:** Wetland swale weaves in and out of survey area beyond property fence; Fresh emergent vegetation present but characterized as wetland swale as long, linear feature visible on aerial conveys flows throughout area. Flows south into larger fresh emergent adjacent to plot.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		0	= Total Cover	
Herb Stratum	(Plot size: 2 m radius _____)			
1	Cypera      Cyperus eragrostis	15	YES	FACW
2	Junspp      Juncus spp.	8	YES	FACW
3	Viospp      Viola spp.	4	NO	FACW
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		27	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 73 % Cover of Biotic Crust:           

## Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant  
Species Across All Strata: 2 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 100% (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>27</u>	x 2 =	<u>54</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>27</u> (A)		<u>54</u> (B)
Prevalence Index = B/A = <u>2</u>		

## Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic  
Vegetation  
Present?**

Yes X No     

**Remarks:** Sample area dominated by hydrophytic FACW vegetation.



SOIL							Sampling Point: 40-1x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10 YR 3/2	100					Silty loam	Dense roots
5-8	10 YR 2/2	98	5 YR 3/4	2	C	M	Silty loam	Prominent redox concentrations
8-16	10 YR 2/2	90	5 YR 3/4	5	C	M	Silty loam	Prominent redox concentrations
				5	C	PL	Silty loam	Prominent redox concentrations
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: <u>Rocky RSP</u>						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Depth (inches): <u>14</u>								
<b>Remarks:</b> Hydric soil indicator F6 observed by a layer that is at least 4 inches thick starting within 8 inches of the soil and has a value of 3 or less and a chroma of 2 or less with at least 5% distinct or prominent redox concentrations occurring as soft masses.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input checked="" type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>0</u>		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>8</u>						
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>1</u>						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Primary hydrology indicated by water table and saturation within 12 inches of the soil surface and secondary indicators saturation visible on aerial imagery and FAC-neutral test present.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 41-1x Feature ID: U5-1x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/12/2020  
 Investigator(s): L. Morris, T. Kayatski Section, Township, Range: 46N, 14E, 28  
 Local relief (hillside, terrace, etc.): Roadside Local Relief (concave, convex, none): Convex Slope (%): 6  
 Subregion (LRR): D Lat: 41.7948 Long: 120.3676 Datum: NAD 83  
 Soil Map Unit Name: Pit Silty Clay Loam, 0 to 2 percent slopes NWI classification: FEW/Seasonal Wetland  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

**Remarks:** Upland pair point to wetland swale along roadside slope where a dominance of hydrophytic vegetation, wetland hydrology, and hydric soils were not observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: 30 m radius)			
1	Chrvis Chrysothamnus viscidiflorus	10	YES	UPL
2	Roscal Rosa californica	2	NO	FAC
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		12	= Total Cover	
Herb Stratum	(Plot size: 2 m radius)			
1	Poapra Poa pratensis	70	YES	FAC
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		70	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 50 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)  
 Total Number of Dominant Species Across All Strata: 2 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>72</u>	x 3 =	<u>216</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>10</u>	x 5 =	<u>50</u>
Column Totals: <u>82</u> (A)		<u>266</u> (B)
Prevalence Index = B/A = <u>3.2439</u>		

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes      No X

**Remarks:** Sample point contains a dominance of upland vegetation.

SOIL							Sampling Point: 41-1x	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10 YR 2/2	100					Silty loam	
2-6	7.5 YR 2/2	100					Silty loam	
6-12	10 YR 3/3	100					Silty loam	
12-16	10 YR 2/1	100					Silty loam	
<sup>1</sup> Type: C=Covered, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)					<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)					<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)					<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)					<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )	<input type="checkbox"/> Depleted Matrix (F3)					<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )	<input type="checkbox"/> Redox Dark Surface (F6)					<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)							
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
						<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<b>Restrictive Layer (if present):</b>					<b>Hydric Soil Present?</b>			
Type: <u>None</u>					Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Depth (inches): <u>NA</u>								
<b>Remarks:</b> Hydric soil indicators were not observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>			
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)					<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)					<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)					<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)					<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)					<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)					<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)					<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)					<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)					<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>			
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	<u>NA</u>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	<u>NA</u>				
Saturation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	<u>NA</u>				
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Wetland hydrology indicators not observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 43-1x Feature ID: W6-1x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/13/2020  
 Investigator(s): L. Morris, T. Kayatski Section, Township, Range: 46N, 14E, 32  
 Local relief (hillside, terrace, etc.): Wetland swale Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 41.7837 Long: -120.3723 Datum: NAD 83  
 Soil Map Unit Name: Salisbury Gravelly Loam, 0 to 9 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

**Remarks:** Fresh emergent wetland is sourced from culvert from east and flows west through wetland. Intermittent stream flows may occur, but not at the time of survey. The wetland point has all three wetland parameters meet.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>1 m radius</u> )				
1	Scimic <i>Scirpus microcarpus</i>	35	YES	OBL
2	Alopra <i>Alopecurus pratensis</i>	15	YES	FACW
3	junspp <i>juncus spp</i>	6	NO	FAC
4				
5				
6				
7				
8				
9				
10				
11				
		<u>56</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 45 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>35</u>	x 1 =	<u>35</u>
FACW species <u>15</u>	x 2 =	<u>30</u>
FAC species <u>6</u>	x 3 =	<u>18</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>56</u> (A)		<u>83</u> (B)
Prevalence Index = B/A = <u>1.4821</u>		

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes X No     

**Remarks:** Sample point is dominated by hydrophytic vegetation and the prevalence index is below 3.

SOIL							Sampling Point: 43-1x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10 YR 2/1	99	5 YR 4/6	1	C	PL	Silty loam	prominent redox
6-16	10 YR 2/2	95	7.5 YR 4/6	2	C	PL	Silty loam	prominent redox
			7.5 YR 4/6	3	C	M	Silty loam	prominent redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Hydric soil is present as shown through indicator F6 (redox dark surface) by having a layer that is at least 4 inches thick starting a depth of less than 8 inches from the soil surface with a matrix value of 3 or less and a chroma of 2 or less with at least 5 percent prominent redox concentrations occurring as soft masses or pore linings.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): 1						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Saturation is present 1 inch below the soil surface indicating wetland hydrology. There are soil surface cracks present in the feature however outside the survey area.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 44-1x Feature ID: U6-1x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/13/2020  
 Investigator(s): L. Morris, T. Kayatski Section, Township, Range: 46N, 14E, 32  
 Local relief (hillside, terrace, etc.): Slight slope Local Relief (concave, convex, none): Convex Slope (%): 2  
 Subregion (LRR): D Lat: 41.7837 Long: -120.3723 Datum: NAD 83  
 Soil Map Unit Name: Salisbury Gravelly Loam, 0 to 9 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u>
Hydric Soil Present?	Yes <u>    </u> No <u>X</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>X</u>	

Remarks: Upland pair point did not meet wetland parameters confirming upland status. Cottonwoods are present near wetland in the upland and likely influence the system, however are not close enough to sample points to include in the vegetation present.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u> = Total Cover		

Sapling/Shrub Stratum (Plot size: <u>30 ft radius</u> )				
1 <u>Erinau</u>	<u>Ericameria nauseosa</u>	<u>5</u>	<u>YES</u>	<u>UPL</u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
5 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>5</u> = Total Cover		

Herb Stratum (Plot size: <u>1 m radius</u> )				
1 <u>Brotec</u>	<u>Bromus tectorum</u>	<u>15</u>	<u>YES</u>	<u>UPL</u>
2 <u>Brohor</u>	<u>Bromus hordeaceus</u>	<u>15</u>	<u>YES</u>	<u>FACU</u>
3 <u>Poapra</u>	<u>Poa pratensis</u>	<u>15</u>	<u>YES</u>	<u>FAC</u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
5 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
6 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
7 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
8 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
9 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
10 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
11 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>45</u> = Total Cover		

Woody Vine Stratum (Plot size: <u>    </u> )				
1 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u> = Total Cover		

%Bare Ground in Herb Stratum: 50 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>15</u>	x 3 =	<u>45</u>
FACU species <u>15</u>	x 4 =	<u>60</u>
UPL species <u>20</u>	x 5 =	<u>100</u>
Column Totals: <u>50</u> (A)		<u>205</u> (B)
Prevalence Index = B/A =		<u>4.1</u>

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Hydrophytic vegetation indicators are not met.

SOIL							Sampling Point: 44-1x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10 YR 2/2	100					Silty loam	
4-16	10 YR 3/2	100					Silty loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Hydric soil indicators are not met.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Wetland hydrology indicators were not observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc county Feature ID: NW2-1x  
 Applicant/Owner: Zayo Group State: CA Sampling Date: 3/11/2020  
 Investigator(s): L. Morris, T. Kayatski Section, Township, Range: 47N, 14E, 34  
 Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): D Lat: 41.876 Long: -120.3458 Datum: NAD 83  
 Soil Map Unit Name: Sailsbury Gravelly Loam, 0 to 9 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x  
 Hydric Soil Present? Yes      No x  
 Wetland Hydrology Present? Yes x No       
 Is the Sampled Area within a Wetland? Yes      No X

Remarks: NW2-1x was suspect area due to visible saturation on aerial imagery in shallow depression. Standing water present at time of survey. Area confirmed as upland, where dominance of hydrophytic vegetation and hydric soils are absent.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		0	= Total Cover	
Herb Stratum	(Plot size: 2 m radius _____)			
1	Juntril Juncus trilocularis	6	NO	FACW
2	Elycap Elymus caput-medusae	60	YES	UPL
3	Poapra* Poa pratensis	20	YES	FAC
4	Rumden Rumex densiflorus	1	NO	FACW
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		87	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 10 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>7</u>	x 2 = <u>14</u>
FAC species <u>20</u>	x 3 = <u>60</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>60</u>	x 5 = <u>300</u>
Column Totals: <u>87</u> (A)	<u>374</u> (B)
Prevalence Index = B/A = <u>4.2989</u>	

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: \*poa pratensis. Hydrophytic vegetation indicators were not met.



SOIL		Sampling Point: 25-1x				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
0-10	10 YR 3/2	100				
10-16	10 YR 3/4	99	10 YR 2/1	1	C	M Silty loam Manganese masses
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.					<sup>4</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						
<input checked="" type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
					<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	
<b>Restrictive Layer (if present):</b>				<b>Hydric Soil Present?</b>		
Type: _____ Depth (inches): _____				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Hydric soil indicators were not observed. Not problematic due to Non hydrophytic vegetation.						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)						
<input checked="" type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input checked="" type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>				<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): 0		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): 0				
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (includes capillary fringe)		Depth (inches): 0				
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> Wetland hydrology indicators were observed. Primary indicators of surface hydrology high water table and saturation and secondary indicator of saturation visible from aerial imagery were all present.						

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Feature ID: NW3-1x  
 Applicant/Owner: Zayo Group State: CA Sampling Date: 3/11/2020  
 Investigator(s): T. Kayatski, L. Morris Section, Township, Range: 46N, 14E, 16  
 Local relief (hillside, terrace, etc.): Depression Local Relief (concave, convex, none): Convex Slope (%): 15  
 Subregion (LRR): D Lat: 41.8281 Long: -120.3536 Datum: NAD 83  
 Soil Map Unit Name: Lorella Cobbly Clay Loam, 30 to 50 percent slopes NWI classification: Fresh Emergent Wetland  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Suspect area with Salix species along steep topographic outfall of culvert at roadside. Area confirmed as upland as no wetland parameters were observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30 ft</u> )				
1 <u>Juocci</u>	<u>Juniperus occidentalis</u>	<u>5</u>	<u>YES</u>	<u>UPL</u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>5</u> = Total Cover		

Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1 <u>Salspp</u>	<u>Salix spp.</u>	<u>45</u>	<u>YES</u>	<u>FACW</u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
5 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>45</u> = Total Cover		

Herb Stratum (Plot size: <u>2 m radius</u> )				
1 <u>Brotec</u>	<u>Bromus tectorum</u>	<u>15</u>	<u>YES</u>	<u>UPL</u>
2 <u>Elycap</u>	<u>Elymus caput-medusae</u>	<u>10</u>	<u>YES</u>	<u>UPL</u>
3 <u>Elyely</u>	<u>Elymus elymoides</u>	<u>10</u>	<u>YES</u>	<u>FACU</u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
5 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
6 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
7 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
8 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
9 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
10 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
11 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>35</u> = Total Cover		

Woody Vine Stratum (Plot size: <u>    </u> )				
1 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u> = Total Cover		

%Bare Ground in Herb Stratum: 15 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>45</u>	x 2 =	<u>90</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>10</u>	x 4 =	<u>40</u>
UPL species <u>30</u>	x 5 =	<u>150</u>
Column Totals: <u>85</u> (A)		<u>280</u> (B)
Prevalence Index = B/A = <u>3.2941</u>		

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Hydrophytic vegetation indicators were not met. Salix Spp=FACW+

SOIL							Sampling Point: 34-1x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	10 YR 3/3	100					Silty loam	No redox
3-12	10 YR 3/4	100					Silty loam	No refox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b> Type: _____ Road prism/RSP Depth (inches): _____ 12						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Hydric soil indicators were not observed above road prism.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)						Secondary Indicators (2 or more required)		
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ NA Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ NA Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ NA (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Wetland hydrology indicators not observed on steep slope adjacent to culvert; drainage patterns absent as flows continue narrowly downhill lacking basin for frequent inundation.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 35-1x Feature ID: NW4-1x  
 Applicant/Owner: Zayo Group State: CA Sampling Date: 3/12/2020  
 Investigator(s): T. Kayatski, L. Morris Section, Township, Range: 46N, 14E, 16  
 Local relief (hillside, terrace, etc.): Hillside Local Relief (concave, convex, none): Convex Slope (%): 15  
 Subregion (LRR): D Lat: 41.8236 Long: -120.3517 Datum: NAD 83  
 Soil Map Unit Name: Lorella Cobbly Clay Loam, 30 to 50 percent slopes NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

**Remarks:** Suspect area with hydrophytic species along steep hillside west of highway. Area confirmed as upland as wetland hydrology and hydric soils were not observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: _____)				
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
<b>Sapling/Shrub Stratum</b> (Plot size: _____)				
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		0	= Total Cover	
<b>Herb Stratum</b> (Plot size: 2 m radius _____)				
1	<u>Leytri</u> <u>Leymus triticoides</u>	55	YES	FAC
2	<u>Symspa</u> <u>Symphyotrichum spathulatum</u>	15	NO	FAC
3	<u>Brotec</u> <u>Bromus tectorum</u>	10	NO	UPL
4	<u>Lepcha</u> <u>Lepidium chalepense</u>	1	NO	UPL
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		81	= Total Cover	
<b>Woody Vine Stratum</b> (Plot size: _____)				
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 19 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 1 (A)  
  
 Total Number of Dominant Species Across All Strata: 1 (B)  
  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>70</u>	x 3 =	<u>210</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>11</u>	x 5 =	<u>55</u>
Column Totals: <u>81</u> (A)		<u>265</u> (B)
Prevalence Index = B/A = <u>3.2716</u>		

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes X No     

**Remarks:** Sample dominated by hydrophytic vegetation.

<b>SOIL</b>								Sampling Point: 35-1x
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	10 YR 2/2	100					Silty clay loam	No redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.					<sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
						<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<b>Restrictive Layer (if present):</b>					<b>Hydric Soil Present?</b>			
Type: <u>Rocky road base</u> Depth (inches): <u>12</u>					Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X			
<b>Remarks:</b> Hydric soil indicators were not observed above restrictive layer.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>			
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>			
Surface Water Present?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/> X	Depth (inches):	<u>NA</u>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X		
Water Table Present?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/> X	Depth (inches):	<u>NA</u>			
Saturation Present?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/> X	Depth (inches):	<u>NA</u>			
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Wetland hydrology indicators not observed on steep slope adjacent to culvert; drainage patterns absent as flows continue narrowly downhill lacking basin for frequent inundation.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Feature ID: NW5-1x  
 Applicant/Owner: Zayo Group State: CA Sampling Date: 3/12/2020  
 Investigator(s): T. Kayatski, L. Morris Section, Township, Range: 46N, 14E, 33  
 Local relief (hillside, terrace, etc.): Hillside Local Relief (concave, convex, none): Convex Slope (%): 15  
 Subregion (LRR): D Lat: 41.7888 Long: -120.3702 Datum: NAD 83  
 Soil Map Unit Name: Drews Clay Loam, 2 to 5 percent slopes NWI classification: Seasonal wetland/ FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

**Remarks:** Suspect area is a NWI mapped wetland. Area was near dilapidated non-functional pipe. Area was dominated by upland grasses. Neither hydrology or soils met wetland parameters. PSS/PEM wetland 5 ft northwest of sample point and out of the survey area.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

<b>Sapling/Shrub Stratum</b> (Plot size: <u>30 m radius</u> )				
1 <u>Erinau</u>	<u>Ericameria nauseosa</u>	<u>8</u>	<u>YES</u>	<u>UPL</u>
2				
3				
4				
5				
		<u>8</u>	= Total Cover	

<b>Herb Stratum</b> (Plot size: <u>2 m radius</u> )				
1 <u>Elyely</u>	<u>Elymus elymoides</u>	<u>6</u>	<u>NO</u>	<u>FACU</u>
2 <u>Poasec</u>	<u>Poa secunda</u>	<u>25</u>	<u>YES</u>	<u>FACU</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>31</u>	= Total Cover	

<b>Woody Vine Stratum</b> (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 60 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>31</u>	x 4 =	<u>124</u>
UPL species <u>8</u>	x 5 =	<u>40</u>
Column Totals: <u>39</u> (A)		<u>164</u> (B)
Prevalence Index = B/A = <u>4.2051</u>		

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

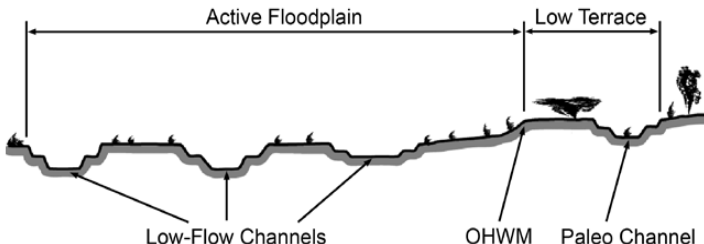
**Hydrophytic Vegetation Present?**

Yes      No X

**Remarks:** There were no hydrophytic plants observed in area.

SOIL		Sampling Point: 42-1x				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
0-4	10 YR 3/2	100			Clay loam	No redox
4-10	10 YR 3/4	50			Clay loam	
4-10	10 YR 3/3	50			Clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.				<sup>4</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						
<input type="checkbox"/> Histosol (A1)		<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Stripped Matrix (S6)				
<input type="checkbox"/> Black Histic (A3)		<input type="checkbox"/> Loamy Mucky Mineral (F1)				
<input type="checkbox"/> Hydrogen Sulfide (A4)		<input type="checkbox"/> Loamy Gleyed Matrix (F2)				
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )		<input type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )		<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)		<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Thick Dark Surface (A12)		<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)		<input type="checkbox"/> Vernal Pools (F9)				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)						
<b>Restrictive Layer (if present):</b>				<b>Hydric Soil Present?</b>		
Type: <u>Rocky road base</u>				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Depth (inches): <u>10</u>						
<b>Remarks:</b> Hydric soil indicators were not observed above restrictive layer.						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)						
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>				<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>NA</u>		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>NA</u>				
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (includes capillary fringe)		Depth (inches): <u>NA</u>				
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> Wetland hydrology indicators were not observed in sample area.						

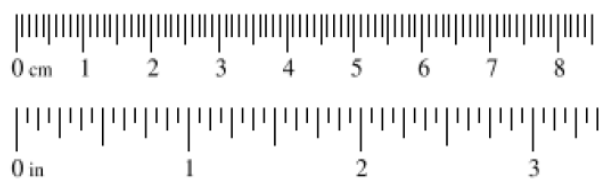
# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 5-2x		<b>Feature ID:</b> D3-2bx		<b>Date:</b> 3/10/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.7481, -120.3754			
<b>Potential anthropogenic influences on the channel system:</b> Appears to be an irrigation channel that has been cut to move water from one side of the highway to the other; flows under Highway 395					
<b>Brief site description:</b> Irrigation canal with water present; flowing west under road.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer           </div> <div style="text-align: center;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:           </div> </div> </li> </ol>					



### Wentworth Size Classes

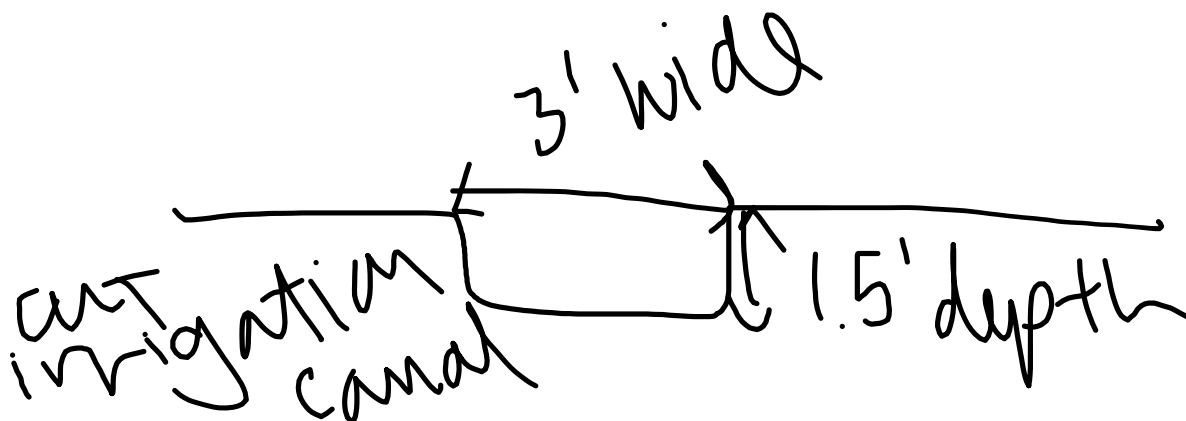
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D3-2bx

Cross section ID:

Date: 3/10/2020 Time:

Cross section drawing:OHWL

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

**Comments:**

Irrigation canal; water present at time of survey. Water has a low flow; algae present.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 5-2x		<b>Feature ID:</b> D03-2x		<b>Date:</b> 3/10/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b>		
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.7481, -120.3757		
<b>Potential anthropogenic influences on the channel system:</b>					
Appears to be an irrigation channel that has been cut to move water from one side of the highway to the other; flows under Highway 395					
<b>Brief site description:</b>					
Irrigation canal with water present; flowing west under road.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> _____		<b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

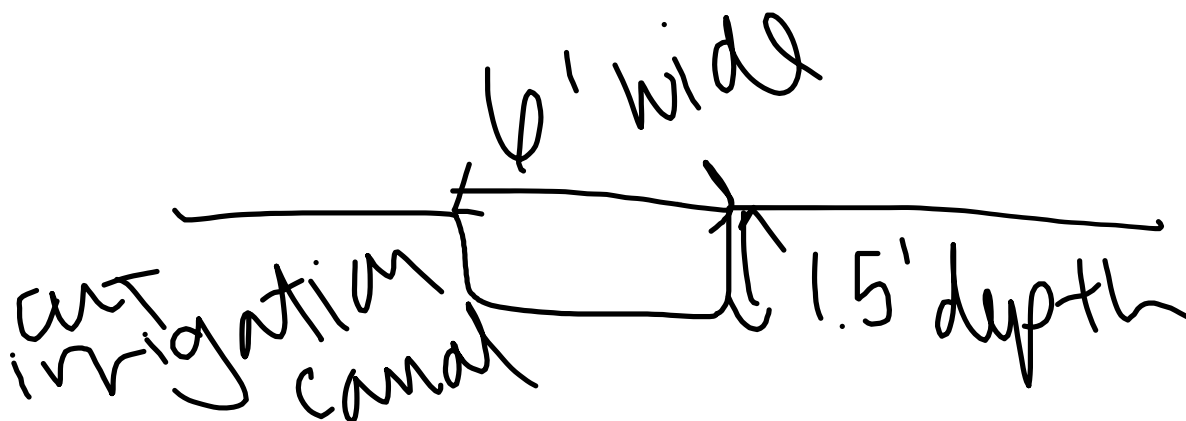
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D03-2x

Cross section ID:

Date: 3/10/2020 Time:

Cross section drawing:OHW

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Irrigation canal; water present at time of survey. Water has a low flow; algae present.

Floodplain unit:☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

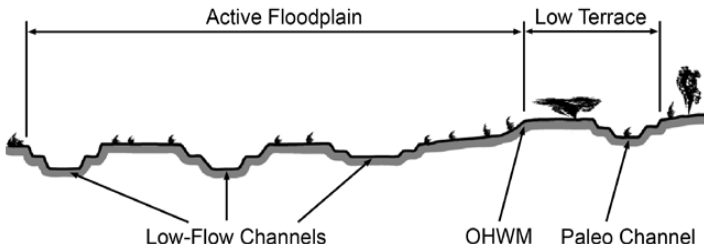
Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

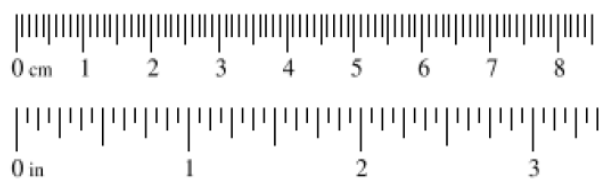
# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 7-2x		<b>Feature ID:</b> D5-2bx		<b>Date:</b> 3/10/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.7480, -120.3754			
<b>Potential anthropogenic influences on the channel system:</b> Appears to be an irrigation channel that has been cut to move water from one side of the highway to the other; flows under Highway 395. Flows through double concrete culverts.					
<b>Brief site description:</b> Irrigation canal with water present; flowing west under road.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					



### Wentworth Size Classes

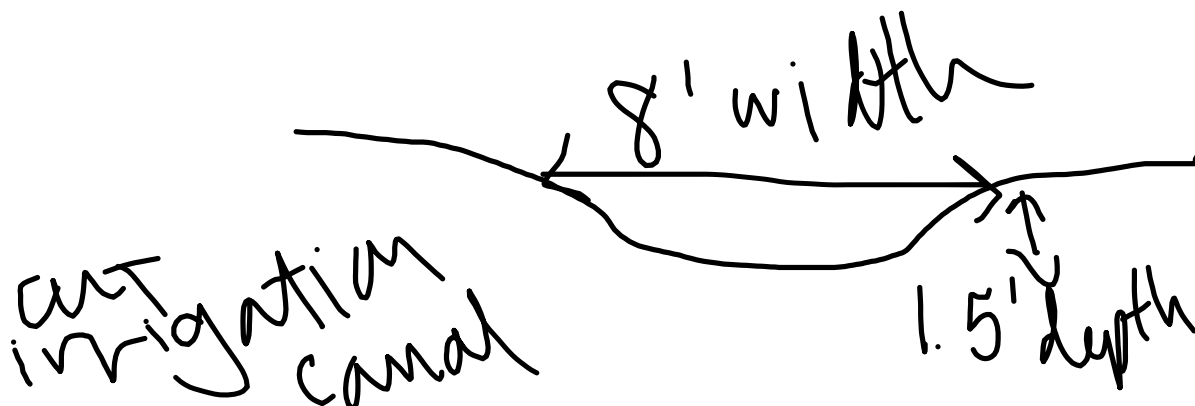
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D5-2bx

Cross section ID:

Date: 3/10/2020 Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:

Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

Comments:

Irrigation canal; water present at time of survey. Water has a low flow; algae present. Cobbles present in bed.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

Indicators:

Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



Other: \_\_\_\_\_

Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

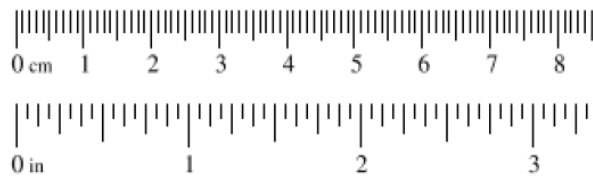
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 7-2x		<b>Feature ID:</b> D05-2x		<b>Date:</b> 3/10/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b>		
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.7478, -120.3757		
<b>Potential anthropogenic influences on the channel system:</b>					
Appears to be an irrigation channel that has been cut to move water from one side of the highway to the other; flows under Highway 395. Flows through double concrete culverts.					
<b>Brief site description:</b>					
Irrigation canal with water present; flowing west under road.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> _____		<b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps		Period of record: _____			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
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1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D05-2x

Cross section ID:

Date: 3/10/2020 Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Irrigation canal; water present at time of survey. Water has a low flow; algae present. Cobbles, small boulders present in bed.

Floodplain unit:☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

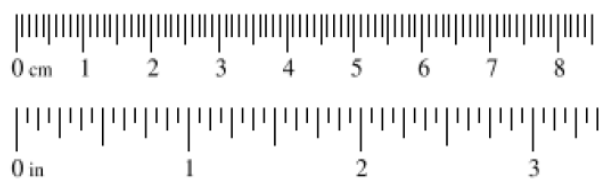
# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 12-2x		<b>Feature ID:</b> D9-2x		<b>Date:</b> 3/10/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.7386, -120.3759			
<b>Potential anthropogenic influences on the channel system:</b> Potentially influenced by use of irrigation water; water movement between hay fields.					
<b>Brief site description:</b> Appears to be an ephemeral stream; flows under Highway 395. Flows through metal culvert.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography <b>Dates:</b> _____		<input type="checkbox"/> Stream gage data <b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies		Period of record: _____ <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<b>Hydrogeomorphic Floodplain Units</b>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

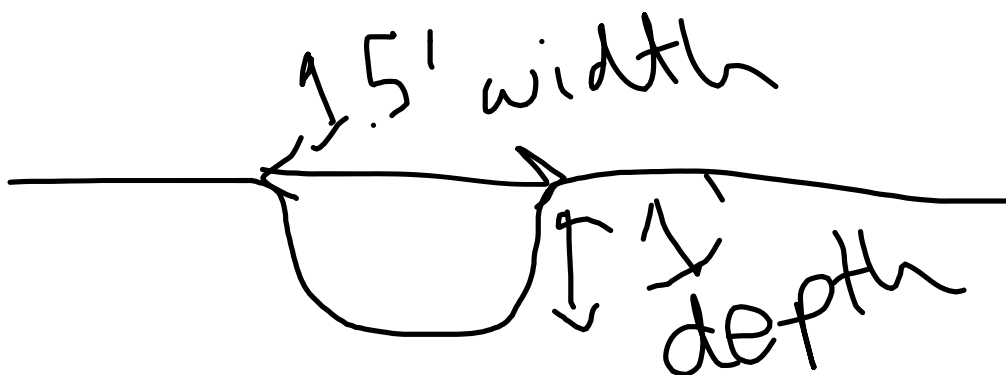


Feature ID: D9-2x

Cross section ID:

Date: 3/10/2020 Time:

Cross section drawing:



OHWM

GPS point: \_\_\_\_\_

**Indicators:**

☐

Change in average sediment texture

☐

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

Presence of bed and bank.

Floodplain unit:

☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Early (herbaceous & seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☐

Presence of bed and bank

☐

Benches

☐

Soil development

☐

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 19-2x		<b>Feature ID:</b> D12-2x		<b>Date:</b> 3/10/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.7296, -120.3753			
<b>Potential anthropogenic influences on the channel system:</b> Intermittent stream with flowing water from one side of the highway to the other; flows under Highway 395. Flows through metal culvert.					
<b>Brief site description:</b> Intermittent stream with water present; flowing west from road.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>  </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

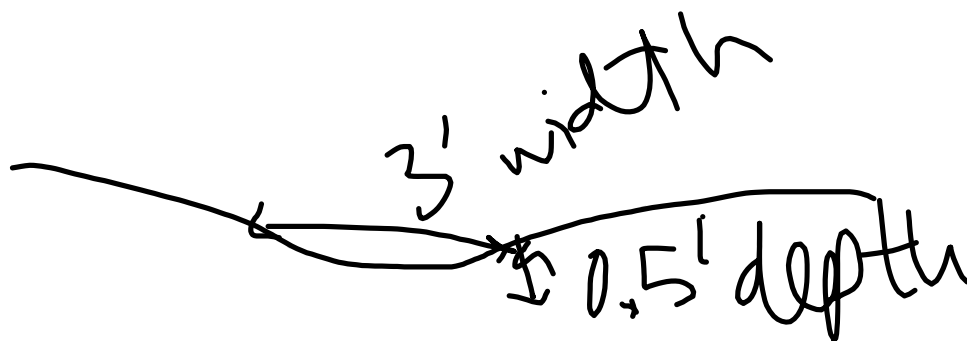
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D12-2x

Cross section ID:

Date: 3/10/2020 Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

Comments:

Intermittent stream; water present at time of survey. Water has steady flow. Vegetation within stream.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

Indicators:

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

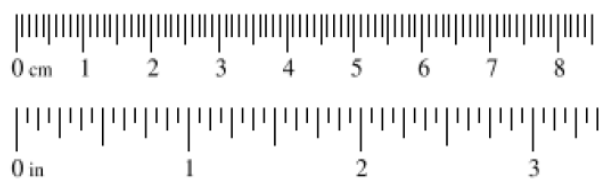
# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 20-2x		<b>Feature ID:</b> D13-2x		<b>Date:</b> 3/10/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.7285, -120.3753			
<b>Potential anthropogenic influences on the channel system:</b> Intermittent stream with flowing water from one side of the highway to the other; flows under Highway 395. Flows through metal culvert.					
<b>Brief site description:</b> Intermittent stream with water present; flowing west from road.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>  </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

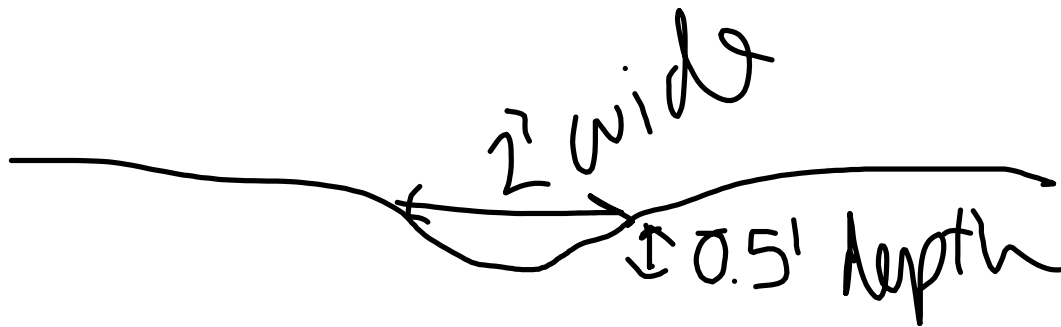


Feature ID: D13-2x

Cross section ID:

Date: 3/10/2020 Time:

Cross section drawing:



OHWM

GPS point: \_\_\_\_\_

**Indicators:**

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species                  | <input type="checkbox"/> Other: _____        |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____        |

**Comments:**

Intermittent stream; water present at time of survey. Water has steady flow. Vegetation within stream; but noticeable gravel and pebble sized sediment in bed.

Floodplain unit:

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

- |   |  |
|---|--|
| <input type="checkbox"/> NA                             | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

**Indicators:**

- |   |   |
|---|---|
| <input type="checkbox"/> Mudcracks                | <input type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples                  | <input type="checkbox"/> Surface relief   |
| <input type="checkbox"/> Drift and/or debris      | <input type="checkbox"/> Other: _____     |
| <input type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____     |
| <input type="checkbox"/> Benches                  | <input type="checkbox"/> Other: _____     |

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 21-2x		<b>Feature ID:</b> D14-2x		<b>Date:</b> 3/10/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>		Do normal circumstances exist on the site?		<b>Location Details:</b>	
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>		Is the site significantly disturbed?			
				<b>Projection:</b> Lambert <b>Datum:</b> NAD83	
				<b>Coordinates:</b> 41.7194, -120.3753	
<b>Potential anthropogenic influences on the channel system:</b>					
Appears to be an irrigation channel that has been cut to move water from one side of the highway to the other; flows under Highway 395. Flows through double metal culverts.					
<b>Brief site description:</b>					
Irrigation canal with stagnant water present; comes from west under road.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> _____		<b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

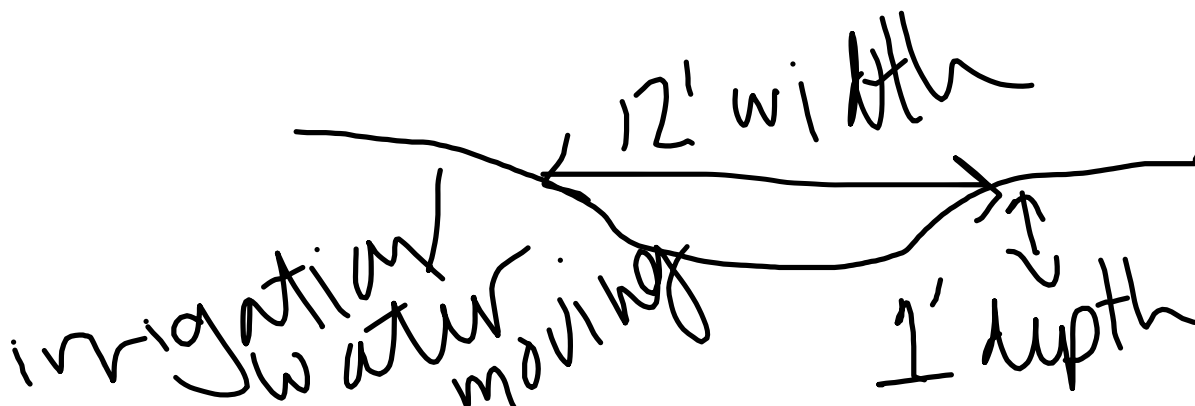
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D14-2x

Cross section ID:

Date: 3/10/2020 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

Irrigation canal; some stagnant water present at time of survey. Water has a low flow.  
Cobbles, pebbles present in bed.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 22-2x		<b>Feature ID:</b> D15-2x		<b>Date:</b> 3/10/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site?		<b>Location Details:</b>			
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?					
		<b>Projection:</b> Lambert <b>Datum:</b> NAD83			
		<b>Coordinates:</b> 41.7142, -120.3754			
<b>Potential anthropogenic influences on the channel system:</b>					
Intermittent stream with flowing water from one side of the highway to the other; flows under Highway 395. Flows through 3 large metal culverts.					
<b>Brief site description:</b>					
Intermittent stream with water present; flowing west from road.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> _____		<b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and			
<input type="checkbox"/> Existing delineation(s) for site		the most recent event exceeding a 5-year event			
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			



### Wentworth Size Classes

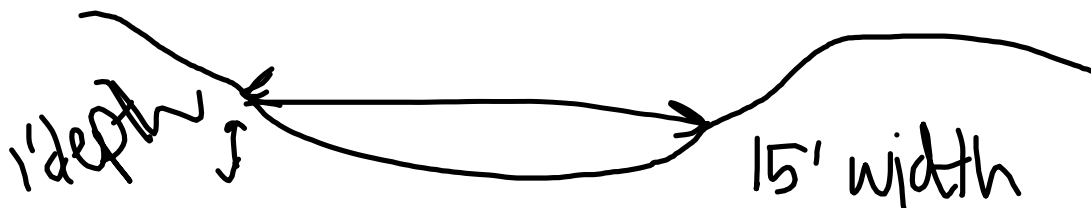
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D15-2x

Cross section ID:

Date: 3/10/2020 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

**Comments:**

Intermittent stream; water present at time of survey. Water has low flow. Cobbles, gravel and pebble sized sediment in bed.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: Silty clay loam

Total veg cover: 90 % Tree: 0 % Shrub: 10 % Herb: 80 %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

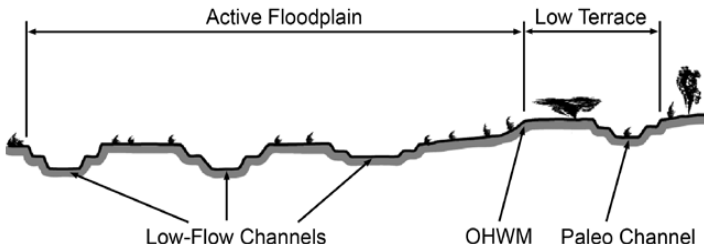
**Comments:**

Low floodplain above OHWM as indicated by noted indicators and some riparian vegetation.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 23-2x		<b>Feature ID:</b> D16-2x		<b>Date:</b> 3/10/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.7101, -120.3754			
<b>Potential anthropogenic influences on the channel system:</b> Looks to be used for irrigation but has indicators of intermittent stream. Water is likely used for irrigation.					
<b>Brief site description:</b> Intermittent stream with flowing water from one side of the highway to the other; flows under Highway 395. Flows come from 2 sources - culvert under Highway and along hwy.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div style="width: 45%;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

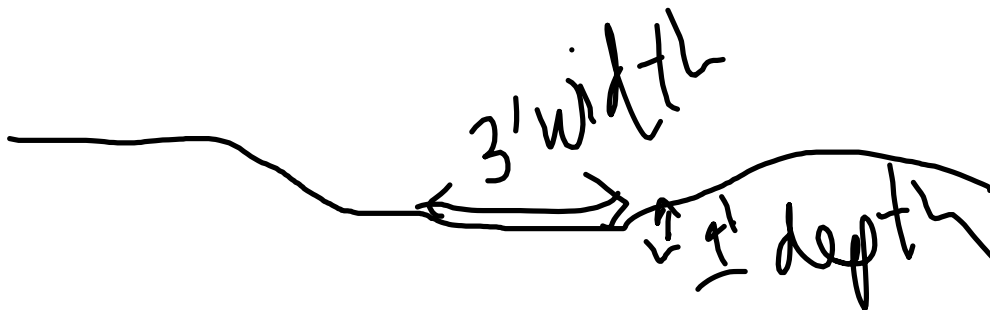
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D16-2x

Cross section ID:

Date: 3/10/2020 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☒ Other: Drift wrack on fenceline☐ Other: \_\_\_\_\_**Comments:**

Intermittent stream; water present at time of survey. Water has low flow. Cobbles, gravel and pebble sized sediment in bed.

**Floodplain unit:**☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> <u>24-2x</u>		<b>Feature ID:</b> <u>D17-2x</u>		<b>Date:</b> <u>3/30/2020</u>	
<b>Project:</b> <u>Zayo Fiber Optic Interconnect</u>					
<b>Location:</b> <u>Modoc county</u>			<b>Photo begin/end file#:</b> <u>See Field Photos</u>		
<b>Investigator(s):</b> <u>Bc, mg</u>					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> <u>Lambert</u> <b>Datum:</b> <u>NAD83</u> <b>Coordinates:</b>			
<b>Potential anthropogenic influences on the channel system:</b> Culverted and highway					
<b>Brief site description:</b> Stream flowing west from under highway.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies </div> <div> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </div> </div>					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>  </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via: <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input type="checkbox"/> Mapping on aerial photograph    <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Digitized on computer    <input type="checkbox"/> Other: </div> </li> </ol>					



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



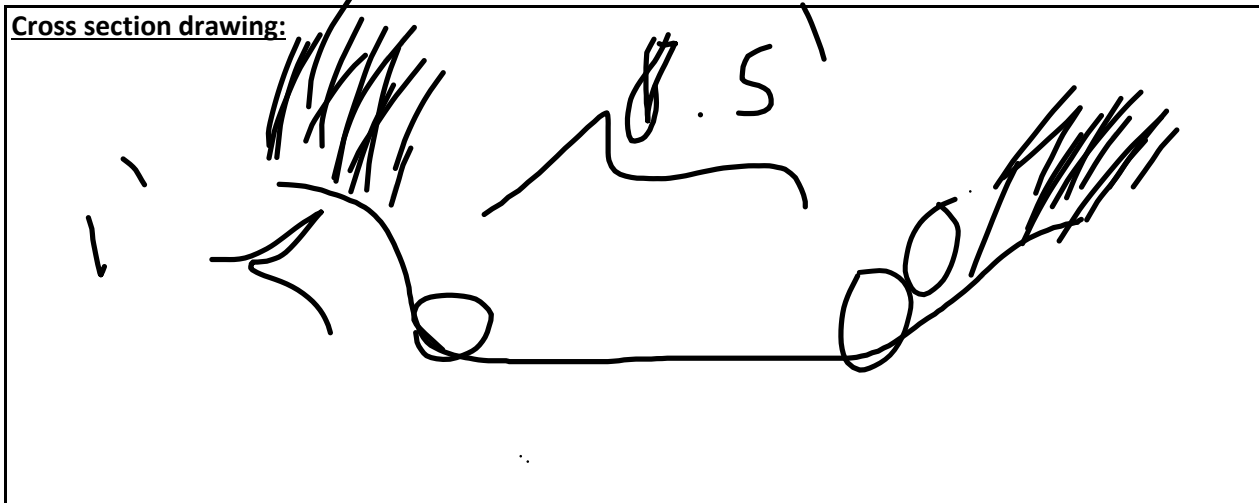
Feature ID:

Cross section ID:

Date:

Time:

Cross section drawing:



### OHW

GPS point: \_\_\_\_\_

Indicators:

☒ Change in average sediment texture

☐ Change in vegetation species

☒ Change in vegetation cover

☒ Break in bank slope

☒ Other: Root exposure

☒ Other: Drift deposits

Comments:

Floodplain unit:

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

Indicators:

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☐ Presence of bed and bank

☐ Benches

☐ Soil development

☐ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# **Arid West Ephemeral and Intermittent Streams OHW M Datasheet**

<b>Sampling Point:</b> <u>24-2x</u>		<b>Feature ID:</b> <u>D17-2x</u>		<b>Date:</b> <u>3/30/2020</u>	
<b>Project:</b> <u>Zayo Fiberoptic</u>					
<b>Location:</b> <u>Modoc county</u>			<b>Photo begin/end file#:</b> <u>See Field Photos</u>		
<b>Investigator(s):</b> <u>B. Cohen, M. Oats</u>					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> <u>Lambert</u> <b>Datum:</b> <u>NAD83</u> <b>Coordinates:</b> <u>41.5780, -120.4359</u>			
<b>Potential anthropogenic influences on the channel system:</b> Culverted and highway					
<b>Brief site description:</b> Stream flowing west from under highway.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </div> </div>					
<div style="text-align: center;"> <p><b>Hydrogeomorphic Floodplain Units</b></p> </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via: <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <input type="checkbox"/> Mapping on aerial photograph    <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Digitized on computer        <input type="checkbox"/> Other: </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

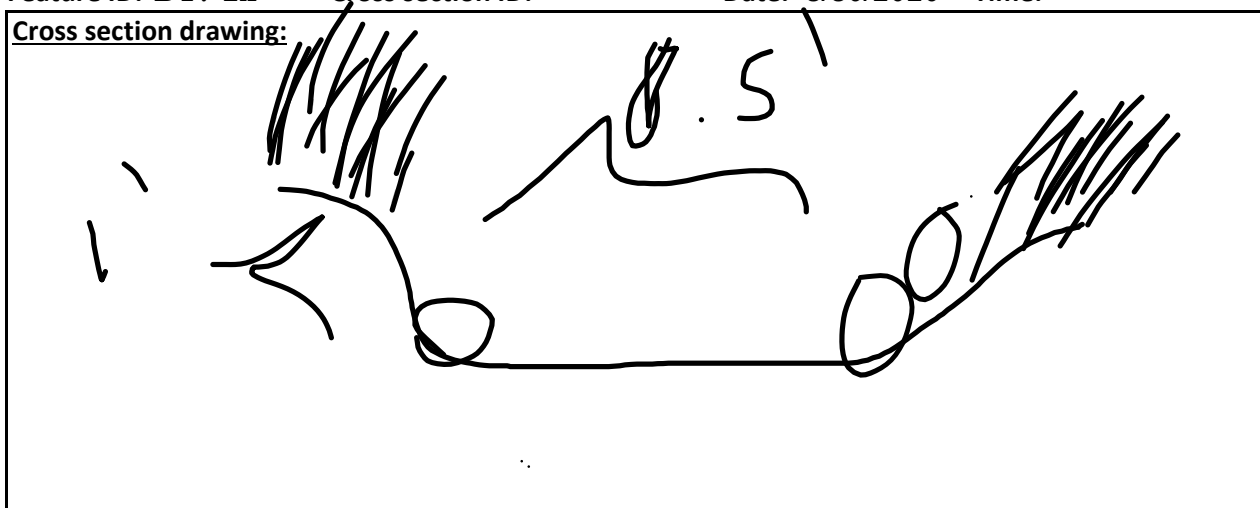


Feature ID: D17-2x

Cross section ID:

Date: 3/30/2020 Time:

Cross section drawing:



#### OHW

GPS point: \_\_\_\_\_

#### Indicators:

☒ Change in average sediment texture

☐ Change in vegetation species

☒ Change in vegetation cover

☒ Break in bank slope

☒ Other: Root exposure

☒ Other: Drift deposits

#### Comments:

Intermittent stream with cobbles on banks.

#### Floodplain unit:

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

#### Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

#### Indicators:

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☐ Presence of bed and bank

☐ Benches

☐ Soil development

☐ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

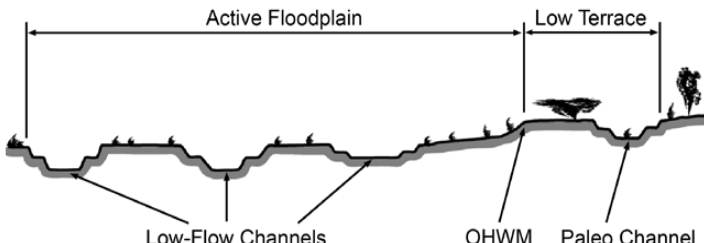
☐ Other: \_\_\_\_\_

#### Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

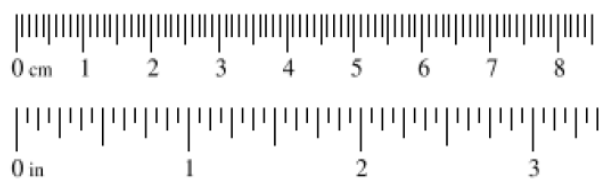
# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 28-2x		<b>Feature ID:</b> D18-2x		<b>Date:</b> 3/11/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.6864, -120.3768			
<b>Potential anthropogenic influences on the channel system:</b> Semi-disturbed area close to roadside and hay fields.					
<b>Brief site description:</b> Ephemeral stream sourcing from culvert under Highway.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies </div> <div> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </div> </div>					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>   </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via: <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other: _____ </div> </li> </ol>					



### Wentworth Size Classes

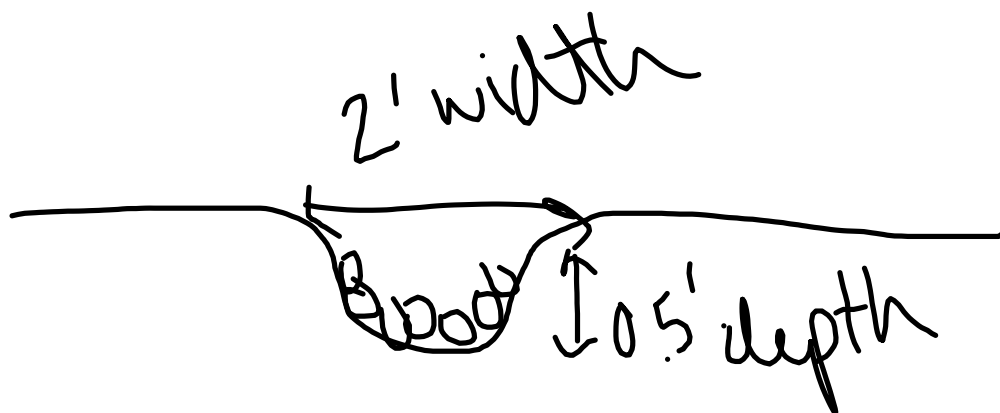
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D18-2x

Cross section ID:

Date: 3/11/2020 Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

Comments:

Ephemeral stream; no water present at time of survey. Small boulders, cobbles, and sediment in bed.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

Indicators:

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

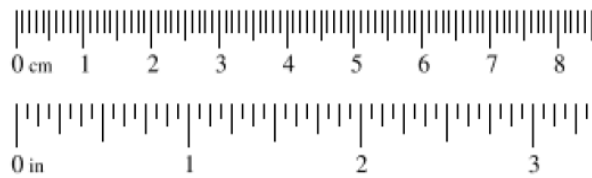
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 33-2x		<b>Feature ID:</b> D19-2x		<b>Date:</b> 3/11/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b>		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.6812, -120.3796		
<b>Potential anthropogenic influences on the channel system:</b>					
Semi-disturbed area close to roadside and hay fields; riparian vegetation (outside of study area) is impounding creek slightly.					
<b>Brief site description:</b>					
Perennial stream (Linnville Creek) sourcing from double metal culverts under Highway.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> _____		<b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and			
<input type="checkbox"/> Existing delineation(s) for site		the most recent event exceeding a 5-year event			
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

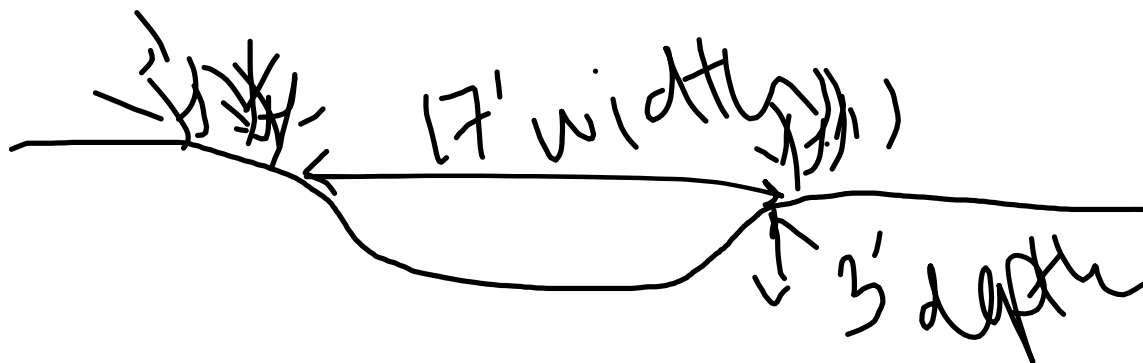
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D19-2x

Cross section ID:

Date: 3/11/2020 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

**Comments:**

Perennial stream; water present at time of survey. Silty sediment in bed. Has associated riparian vegetation (outside of study area).

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: SiltTotal veg cover: 70 % Tree: \_\_\_\_\_ % Shrub: 85 % Herb: 15 %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

**Comments:**

Drift wrack on fence line; shrub species and grasses in floodplain.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 34-2x		<b>Feature ID:</b> D20-2x		<b>Date:</b> 3/11/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>		Do normal circumstances exist on the site?		<b>Location Details:</b>	
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>		Is the site significantly disturbed?			
				<b>Projection:</b> Lambert <b>Datum:</b> NAD83	
				<b>Coordinates:</b> 41.787, -120.3810	
<b>Potential anthropogenic influences on the channel system:</b>					
Significantly disturbed area close to roadside; water ponds due to impoundments of moved soil.					
<b>Brief site description:</b>					
Intermittent stream sourcing from culvert under Highway.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> _____		<b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and			
<input type="checkbox"/> Existing delineation(s) for site		the most recent event exceeding a 5-year event			
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			



### Wentworth Size Classes

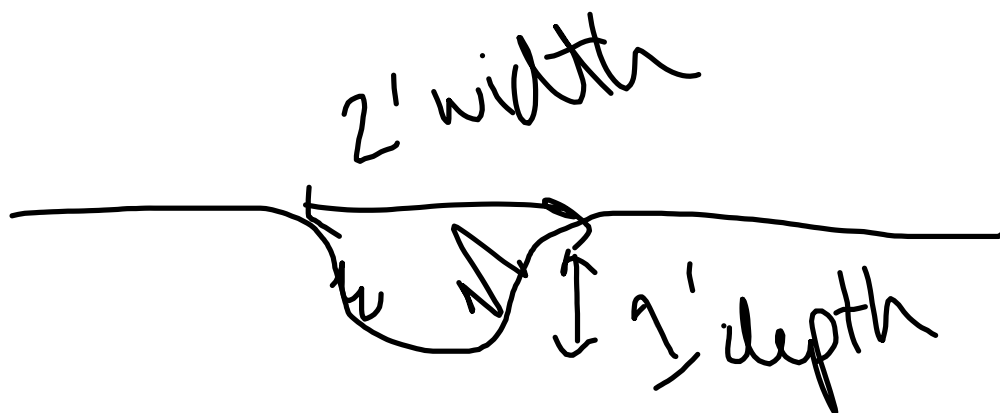
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D20-2x

Cross section ID:

Date: 3/11/2020 Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☒ Other: Drift wrack on fenceline☐ Other: \_\_\_\_\_Comments:

Intermittent stream; water present at time of survey, pooling in impounded areas. Small cobbles, and sediment in bed.

Floodplain unit:☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 40-2x		<b>Feature ID:</b> D24-2x		<b>Date:</b> 3/12/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.6697, -120.3857			
<b>Potential anthropogenic influences on the channel system:</b> Ephemeral drainage, running under highway; manipulated slightly for irrigation purposes.					
<b>Brief site description:</b> Ephemeral stream sourcing from metal culvert under Highway.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography <b>Dates:</b> _____		<input type="checkbox"/> Stream gage data <b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies		Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D24-2x

Cross section ID:

Date:

Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

**Comments:**

Goes to irrigation pond to west (outside of survey area). No water present at time of survey. Has cobbles and gravel in bed of channel.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

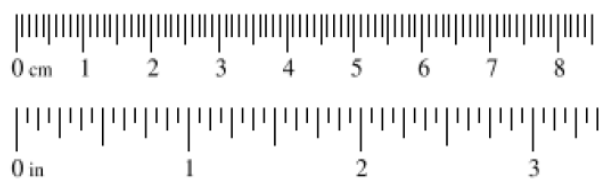
# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 41-2x		<b>Feature ID:</b> D25-2x		<b>Date:</b> 3/12/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.6625, -120.3895			
<b>Potential anthropogenic influences on the channel system:</b> Manipulated drainage to move water from other side of highway for irrigation use.					
<b>Brief site description:</b> Irrigation ditch sourcing from metal culvert under Highway.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>  </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

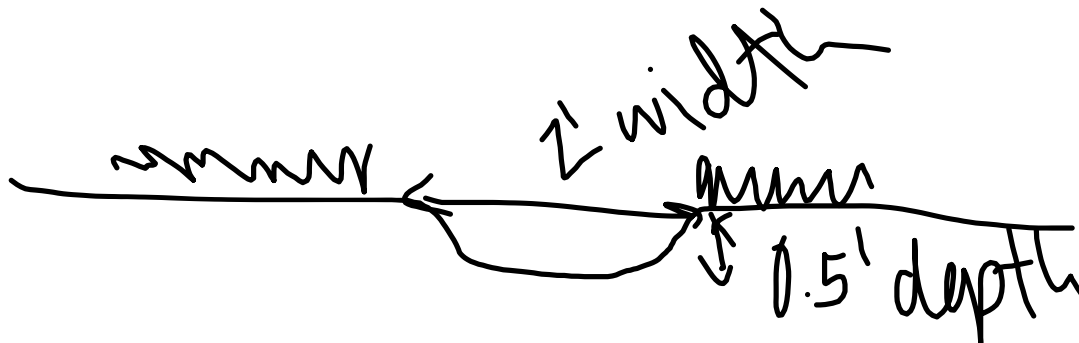


Feature ID: D25-2x

Cross section ID:

Date: 12-Mar

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☒ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Water present at time of survey. Water is low flowing. Presence of algae and silty sediment in bed.

Floodplain unit:☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 42-2x		<b>Feature ID:</b> D26-2x		<b>Date:</b> 3/12/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site?		<b>Location Details:</b>			
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?					
		<b>Projection:</b> Lambert <b>Datum:</b> NAD83			
		<b>Coordinates:</b> 41.6599, -120.3909			
<b>Potential anthropogenic influences on the channel system:</b> Manipulated drainage to move water from other side of highway for irrigation use.					
<b>Brief site description:</b> Irrigation ditch sourcing from metal culvert under Highway.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> _____		<b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps		Period of record: _____			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

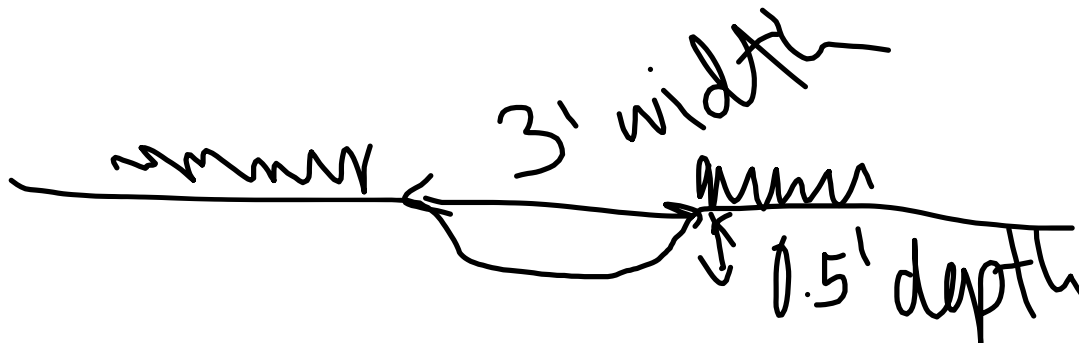


Feature ID: D26-2x

Cross section ID:

Date: 12-Mar

Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

**Comments:**

Water present at time of survey. Water is low flowing. Presence of algae and silty sediment in bed.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

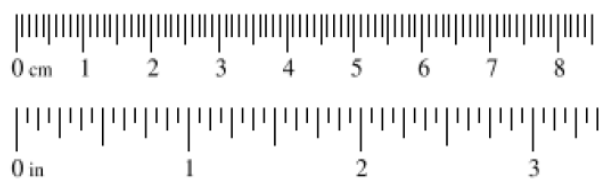
# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 43-2x		<b>Feature ID:</b> D27-2x		<b>Date:</b> 3/12/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>		Do normal circumstances exist on the site?		<b>Location Details:</b>	
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>		Is the site significantly disturbed?			
				<b>Projection:</b> Lambert <b>Datum:</b> NAD83	
				<b>Coordinates:</b> 41.6571, -120.3923	
<b>Potential anthropogenic influences on the channel system:</b>					
Manipulated drainage to move water from other side of highway for irrigation use.					
<b>Brief site description:</b>					
Irrigation ditch sourcing from metal culvert under Highway.					
<b>Checklist of resources (if available)</b>					
<input type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> _____		<b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and			
<input type="checkbox"/> Existing delineation(s) for site		the most recent event exceeding a 5-year event			
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW and record the indicators. Record the OHW position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

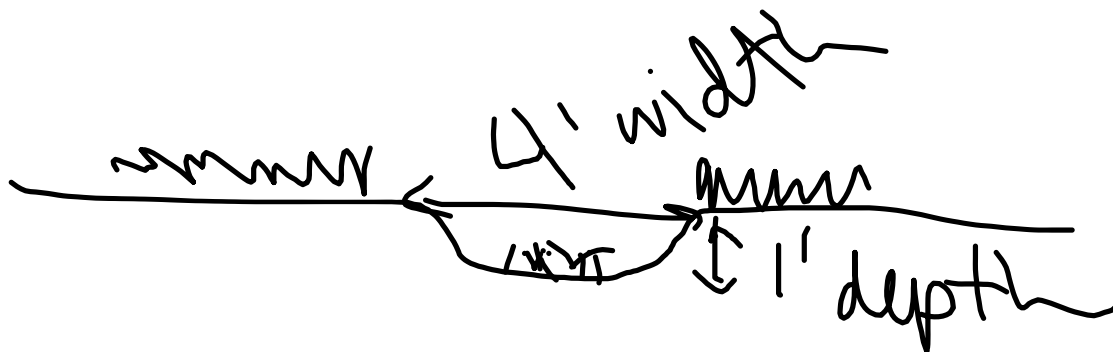


Feature ID: D27-2x

Cross section ID:

Date: 12-Mar

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☐

Change in average sediment texture

☐

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

Comments:

Water present at time of survey. Water is low flowing. Presence of algae and silty sediment in bed.

Floodplain unit:☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Early (herbaceous &amp; seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

Indicators:☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☐

Presence of bed and bank

☐

Benches

☐

Soil development

☐

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

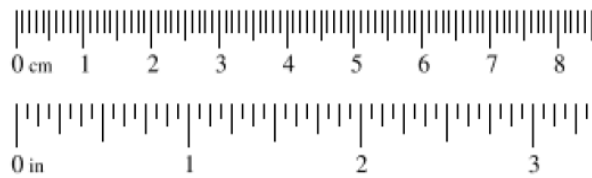
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 49-2x		<b>Feature ID:</b> D28-2x		<b>Date:</b> 3/13/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.6016, -120.4230			
<b>Potential anthropogenic influences on the channel system:</b> Between highway and railroad.					
<b>Brief site description:</b> Perennial river (North fork of Pit River); flows north to south between highway and railroad.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies </div> <div> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </div> </div>					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>  </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via: <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input checked="" type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input type="checkbox"/> GPS  <input type="checkbox"/> Other: _____ </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



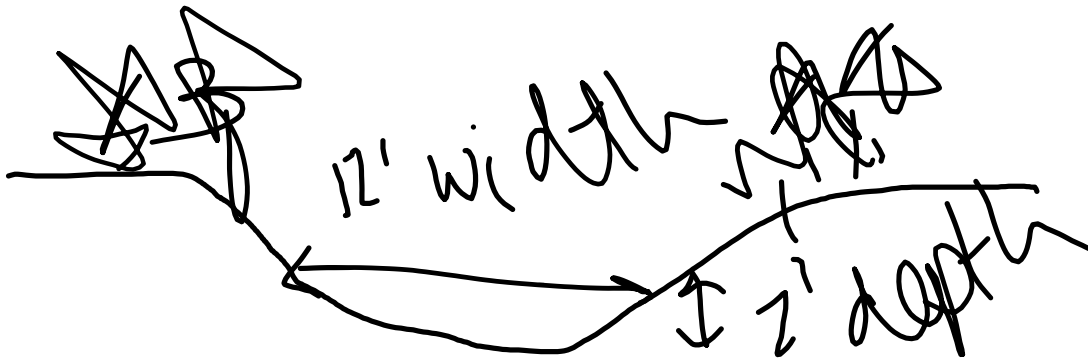
Feature ID: D28-2x

Cross section ID:

Date: 13-Mar

Time:

**Cross section drawing:**



**OHWM**

GPS point: \_\_\_\_\_

**Indicators:**

☒ Change in average sediment texture

☐ Change in vegetation species

☒ Change in vegetation cover

☒ Break in bank slope

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

**Comments:**

Water present and flowing at time of survey. Presence of small boulders, cobbles in bed.

**Floodplain unit:**

☒ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: Cobbles, silty sediment

Total veg cover: 0 % Tree:      % Shrub:      % Herb:      %

Community successional stage:

☒ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☐ Presence of bed and bank

☐ Benches

☐ Soil development

☐ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input checked="" type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy clay loam</u>			
Total veg cover: <u>90</u> % Tree: <u>0</u> % Shrub: <u>40</u> % Herb: <u>60</u> %			
Community successional stage:			
<input type="checkbox"/> NA	<input checked="" type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input checked="" type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input checked="" type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			
Riparian floodplain abuts River.			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 54-2x		<b>Feature ID:</b> D29-2x		<b>Date:</b> 3/13/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.5938, -120.4232			
<b>Potential anthropogenic influences on the channel system:</b> Between highway and railroad.					
<b>Brief site description:</b> Perennial river (Thoms Creek); flows east to west into Pit River.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>  </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

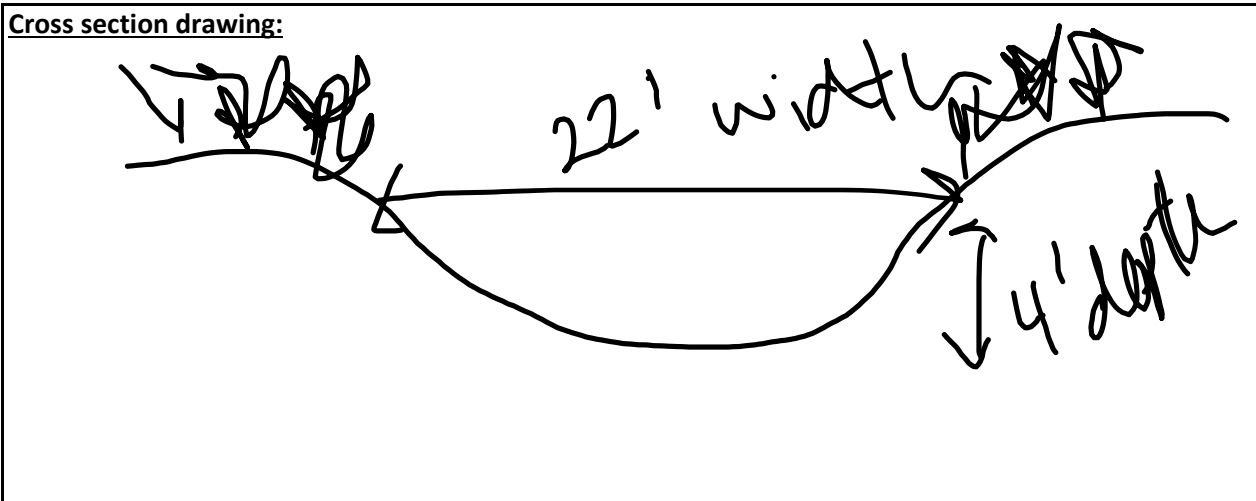


Feature ID: D29-2x

Cross section ID:

Date: 13-Mar

Time:

**Cross section drawing:****OHWL**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

**Comments:**

Water present and flowing steadily at time of survey. Presence of small boulders, cobbles in bed.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Cobbles, small bouldersTotal veg cover: 0 % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



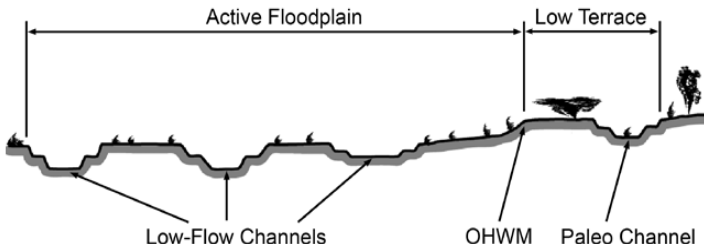
Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input checked="" type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy clay loam</u>			
Total veg cover: <u>80</u> % Tree: <u>0</u> % Shrub: <u>70</u> % Herb: <u>30</u> %			
Community successional stage:			
<input type="checkbox"/> NA	<input checked="" type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input checked="" type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input checked="" type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input checked="" type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			
Riparian floodplain abuts River.			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 52-2		<b>Feature ID:</b> D50-2bx		<b>Date:</b> 3/11/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.6655, -120.3880			
<b>Potential anthropogenic influences on the channel system:</b> Manipulated drainage to move water from other side of highway for irrigation use.					
<b>Brief site description:</b> Irrigation ditch sourcing from metal culvert under Highway.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other: _____             </div> </div> </li> </ol>					

### Wentworth Size Classes

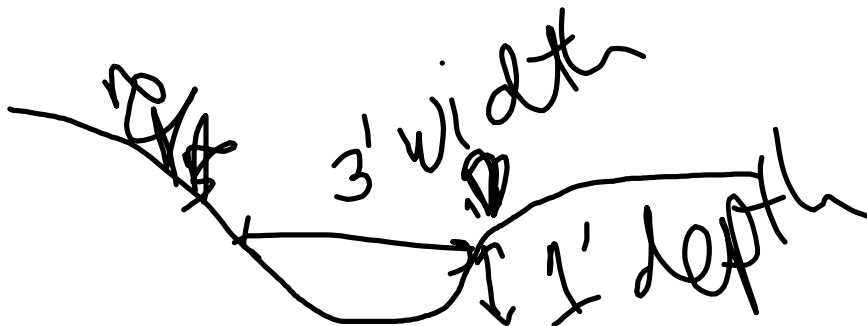
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D50-2bx

Cross section ID:

Date: 3/11/2020 Time:

Cross section drawing:OHW

GPS point: \_\_\_\_\_

Indicators:

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

Comments:

Water present at time of survey. Presence of cobbles, pebbles, and sediment in bed.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: Silty loamTotal veg cover: 90 % Tree: \_\_\_\_\_ % Shrub: 80 % Herb: 20 %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

Indicators:

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

Comments:

Floodplain has riparian vegetation (non-wetland).

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 54-2		<b>Feature ID:</b> D51-2bx		<b>Date:</b> 3/11/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.6712, -120.3849			
<b>Potential anthropogenic influences on the channel system:</b> Manipulated drainage to move water from other side of highway for irrigation use. Outside of study area, drainage dissolves into flood irrigation.					
<b>Brief site description:</b> Irrigation ditch sourcing from culvert under Highway.					
<b>Checklist of resources (if available)</b> <input checked="" type="checkbox"/> Aerial photography <input type="checkbox"/> Stream gage data <b>Dates:</b> _____ <b>Gage number:</b> _____ <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Period of record: <input type="checkbox"/> Geologic maps <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Vegetation maps <input type="checkbox"/> Results of flood frequency analysis <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event <input checked="" type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p> <p style="text-align: center;"><b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b></p> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via: <div style="display: flex; justify-content: space-around;"> <input type="checkbox"/> Mapping on aerial photograph <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Digitized on computer <input type="checkbox"/> Other: </div> </li> </ol>					



### Wentworth Size Classes

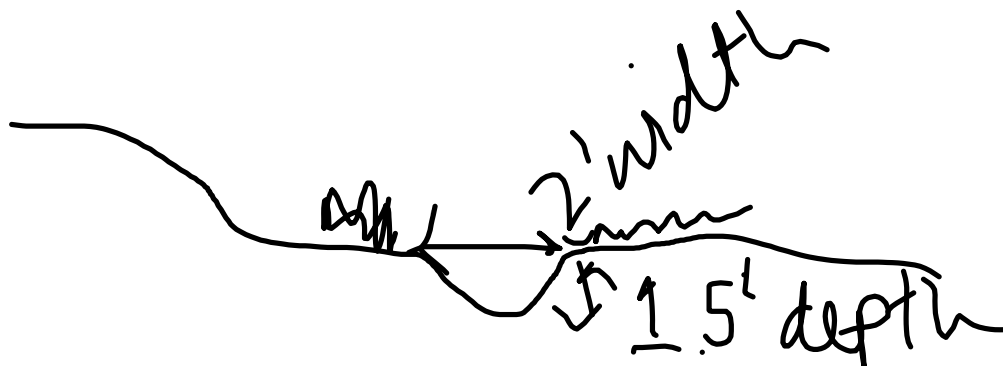
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D51-2bx

Cross section ID:

Date: 3/11/2020 Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☒ Other: Some sediment deposits☐ Other: \_\_\_\_\_Comments:

Water present at time of survey. Presence of silty sandy sediment in bed.

Floodplain unit:☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

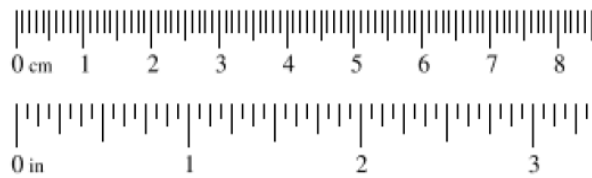
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 55-2		<b>Feature ID:</b> D52-2bx		<b>Date:</b> 3/11/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.6752, -120.3828			
<b>Potential anthropogenic influences on the channel system:</b> Close proximity to highway and hay fields.					
<b>Brief site description:</b> Ephemeral stream sourcing from culvert under Highway.					
<b>Checklist of resources (if available)</b> <input checked="" type="checkbox"/> Aerial photography <input type="checkbox"/> Stream gage data <b>Dates:</b> _____ <b>Gage number:</b> _____ <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Period of record: <input type="checkbox"/> Geologic maps <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Vegetation maps <input type="checkbox"/> Results of flood frequency analysis <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and <input type="checkbox"/> Existing delineation(s) for site the most recent event exceeding a 5-year event <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW and record the indicators. Record the OHW position via: <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other: </div> </div> </li> </ol>					

### Wentworth Size Classes

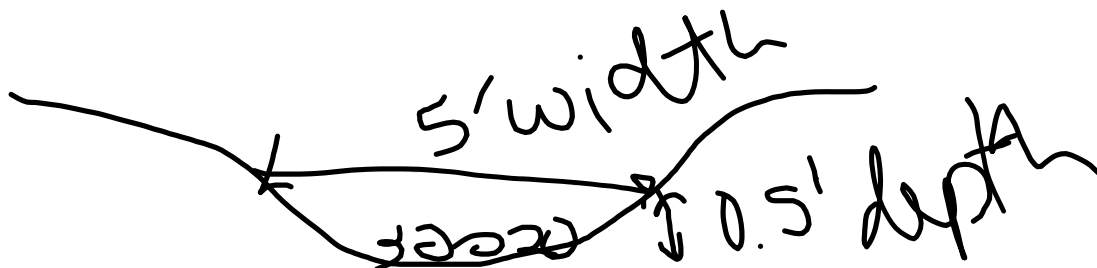
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D52-2bx

Cross section ID:

Date: 3/11/2020 Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

**Comments:**

Ephemeral stream; no water present at time of survey. Small boulders, cobbles, gravel, and sediment in bed.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 63-2		<b>Feature ID:</b> D54-2bx		<b>Date:</b> 3/9/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.7571, -120.3756			
<b>Potential anthropogenic influences on the channel system:</b> Boulders, flows under Highway 395					
<b>Brief site description:</b> Ephemeral stream flowing west under road; cobble bottom					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>  </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

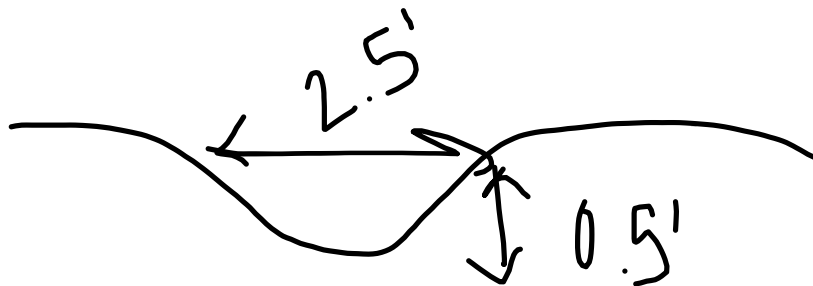


Feature ID: D54-2bx

Cross section ID:

Date: 3/9/2020

Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

Small boulders; may be placed anthropogenically. Continue past boulder area with slight OHWM indicators (evidence of ephemeral flow).

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

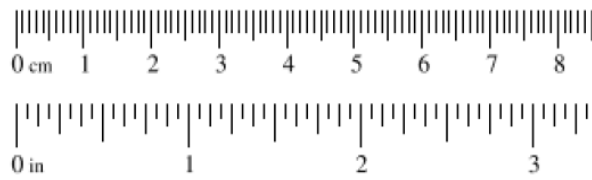
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 117-2		<b>Feature ID:</b> D105-2bx		<b>Date:</b> 3/10/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.7364, -120.3756			
<b>Potential anthropogenic influences on the channel system:</b> Perennial stream with flowing water from one side of the highway to the other; flows under Highway 395. Flows through large metal culvert.					
<b>Brief site description:</b> Perennial stream with water present; flowing west under road.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography <b>Dates:</b> _____		<input type="checkbox"/> Stream gage data <b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies		Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b> </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

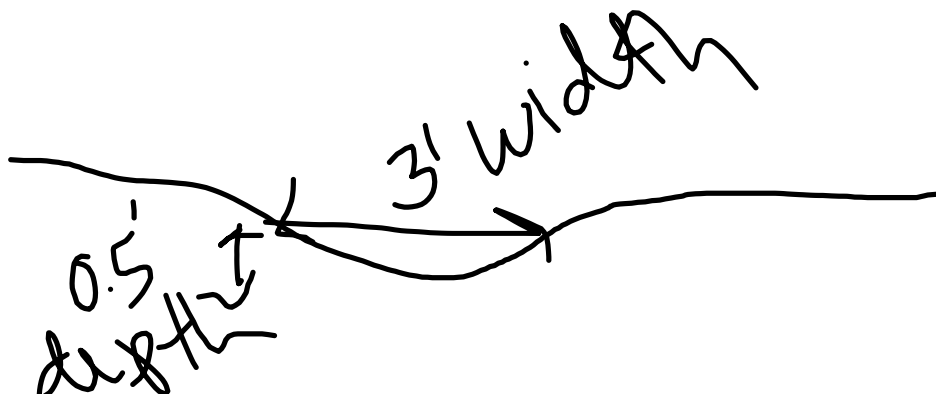
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D105-2bx Cross section ID:

Date: 3/10/2020 Time:

**Cross section drawing:**



**OHW**

GPS point: \_\_\_\_\_

**Indicators:**

☒ Change in average sediment texture

☐ Change in vegetation species

☒ Change in vegetation cover

☒ Break in bank slope

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

**Comments:**

Perennial stream; water present at time of survey. Water has steady flow. Cobbles present in bed.

**Floodplain unit:**

☒ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: Top of bank

**Characteristics of the floodplain unit:**

Average sediment texture: Silty clay loam

Total veg cover: 95 % Tree: 10 % Shrub: 15 % Herb: 70 %

Community successional stage:

☐ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☒ Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐ Mudcracks

☐ Ripples

☒ Drift and/or debris

☒ Presence of bed and bank

☐ Benches

☐ Soil development

☒ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

**Comments:**

Riparian willows and Phalaris arundinacea lining creek in the floodplain.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

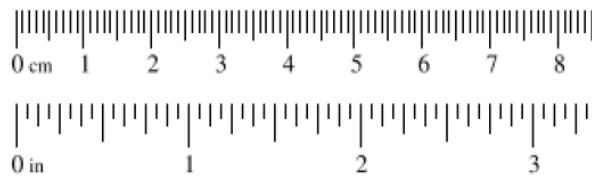
# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 118-2		<b>Feature ID:</b> D106-2bx		<b>Date:</b> 3/10/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.7371, -120.3757			
<b>Potential anthropogenic influences on the channel system:</b> Perennial stream with flowing water from one side of the highway to the other; flows under Highway 395. Flows through large metal culvert.					
<b>Brief site description:</b> Perennial stream (Davis Creek) with water present; flowing west under road.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>  </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHWM and record the indicators. Record the OHWM position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other: _____             </div> </div> </li> </ol>					



### Wentworth Size Classes

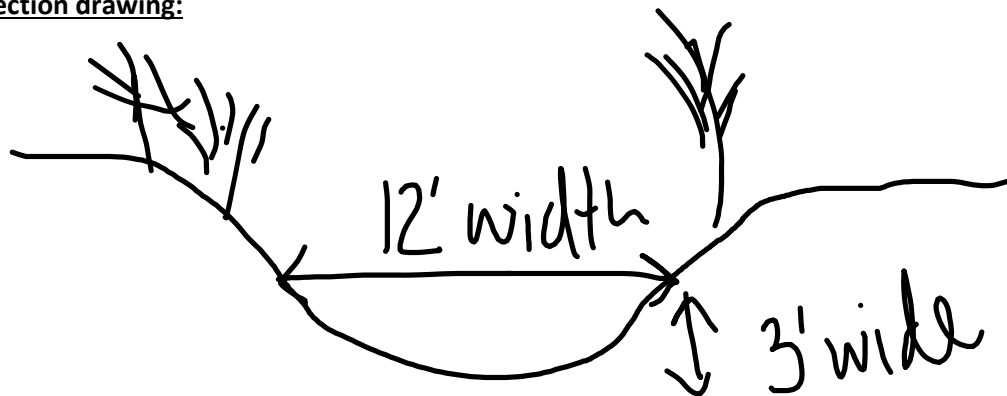
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D106-2bx Cross section ID:

Date: 3/10/2020 Time:

**Cross section drawing:**



**OHW**

GPS point: \_\_\_\_\_

**Indicators:**

☒ Change in average sediment texture

☐ Change in vegetation species

☒ Change in vegetation cover

☒ Break in bank slope

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

**Comments:**

Perennial stream; water present at time of survey. Water has steady flow. Cobbles present in bed.

**Floodplain unit:**

☒ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: Top of bank

**Characteristics of the floodplain unit:**

Average sediment texture: Silty clay loam

Total veg cover: 85 % Tree: 25 % Shrub: 40 % Herb: 20 %

Community successional stage:

☐ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☒ Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐ Mudcracks

☐ Ripples

☒ Drift and/or debris

☒ Presence of bed and bank

☒ Benches

☐ Soil development

☒ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

**Comments:**

Riparian willows lining creek in the floodplain.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> <u>123-2</u>		<b>Feature ID:</b> <u>D109-2bx</u>		<b>Date:</b> <u>3/10/2020</u>	
<b>Project:</b> <u>Zayo Fiberoptic</u>					
<b>Location:</b> <u>Modoc County</u>			<b>Photo begin/end file#:</b> <u>See Field Photos</u>		
<b>Investigator(s):</b> <u>M. Oats, B. Cohen</u>					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> <b>Projection:</b> <u>Lambert</u> <b>Datum:</b> <u>NAD83</u> <b>Coordinates:</b> <u>41.7407, -120.3760</u>			
<b>Potential anthropogenic influences on the channel system:</b> Potentially influenced by use of irrigation water.					
<b>Brief site description:</b> Appears to be an ephemeral stream; flows under Highway 395. Flows through metal culvert.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography <b>Dates:</b> _____		<input type="checkbox"/> Stream gage data <b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies		Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<b>Hydrogeomorphic Floodplain Units</b>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

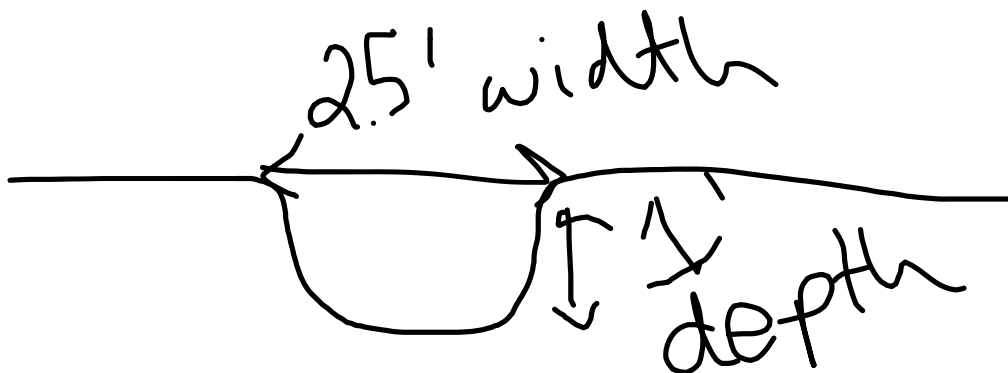
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D109-2bx Cross section ID:

Date: 3/10/2020 Time:

Cross section drawing:



OHWM

GPS point: \_\_\_\_\_

**Indicators:**

☐

Change in average sediment texture

☐

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

Presence of bed and bank.

Floodplain unit:

☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Early (herbaceous & seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☐

Presence of bed and bank

☐

Benches

☐

Soil development

☐

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

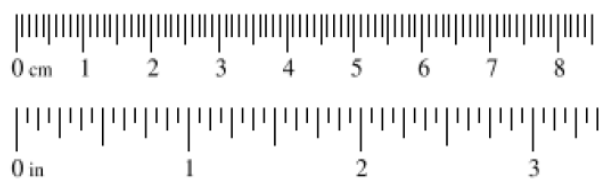
# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 126-2		<b>Feature ID:</b> D110-2bx		<b>Date:</b> 3/9/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.7447, -120.3758			
<b>Potential anthropogenic influences on the channel system:</b> Box culvert, flows under Highway 395					
<b>Brief site description:</b> Perennial stream flowing west under road; cobble bottom					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>  </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

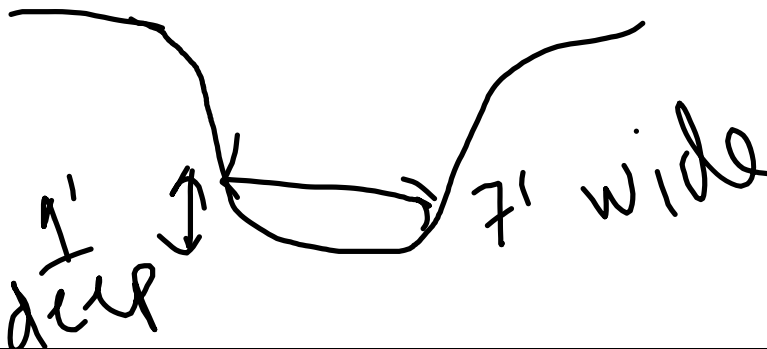


Feature ID: D110-2bx

Cross section ID:

Date: 3/9/2020

Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

**Comments:**

Cobbles in bed of stream; water present at time of survey. Bunch wheatgrass on banks.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Cobbles, pebblesTotal veg cover: 80 % Tree: 0 % Shrub: 30 % Herb: 50 %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

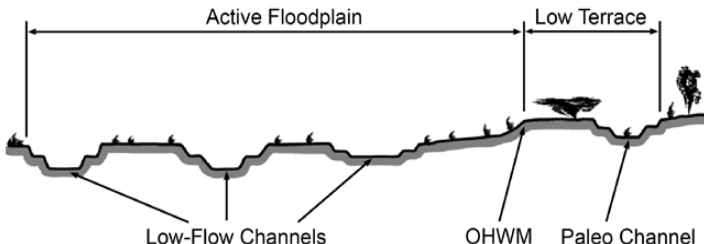
**Comments:**

Alders and bunchgrass located in floodplain; non-wetland riparian.

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 127-2		<b>Feature ID:</b> D111-2bx		<b>Date:</b> 3/10/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.7452, -120.3758			
<b>Potential anthropogenic influences on the channel system:</b> Appears to be a perennial stream with flowing water from one side of the highway to the other; flows under Highway 395. Flows through metal culvert.					
<b>Brief site description:</b> Perennial with water present; flowing west under road.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <div style="margin-left: 20px;">           a) Record the floodplain unit and GPS position.            b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.            c) Identify any indicators present at the location.         </div> 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHW M and record the indicators. Record the OHW M position via: <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer         </div> <div style="text-align: center;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:         </div> </div>					

### Wentworth Size Classes

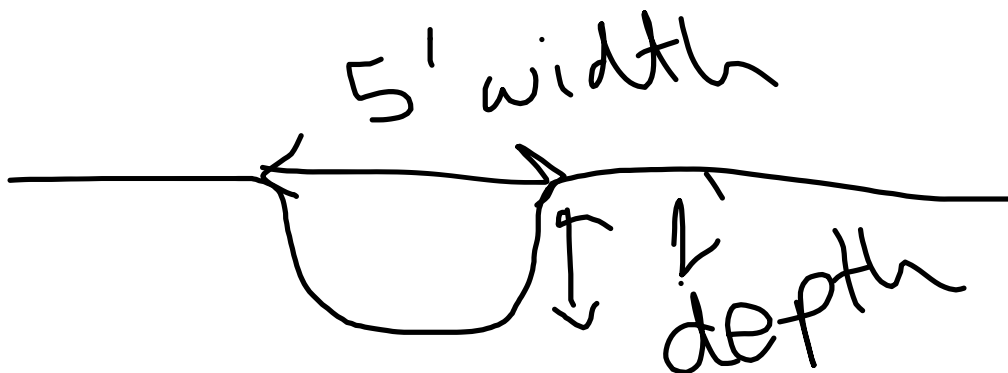
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D111-2bx Cross section ID:

Date: 3/10/2020 Time:

Cross section drawing:



OHWM

GPS point: \_\_\_\_\_

**Indicators:**

☒ Change in average sediment texture

☐ Change in vegetation species

☒ Change in vegetation cover

☒ Break in bank slope

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

**Comments:**

Perennial stream; water present at time of survey. Water has steady flow. Cobbles and silty bottom present in bed.

Floodplain unit:

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☐ Presence of bed and bank

☐ Benches

☐ Soil development

☐ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 3-2x Feature ID: W01-2x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/10/2020  
 Investigator(s): M. Oats, B. Cohen Section, Township, Range: 45N, 14E, 8  
 Local relief (hillside, terrace, etc.): flat meadow Local Relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR): D Lat: 41.7485 Long: -120.3757 Datum: NAD 83  
 Soil Map Unit Name: Drews Clay Loam, wet, 0 to 2 percent slopes NWI classification: Seasonal wetland/ FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? No (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: Sample point satisfies all three wetland parameters.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: <u>30' radius</u> )	% Cover	Species?	Status
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum	(Plot size: <u>15' radius</u> )			
1				
2				
3				
4				
5				
		<u>0</u>	= Total Cover	

Herb Stratum	(Plot size: <u>5' radius</u> )			
1	<u>Phaaruru</u>	<u>Phalaris arundinacea</u>	<u>100</u>	<u>YES</u> <u>FACW</u>
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>100</u>	= Total Cover	

Woody Vine Stratum	(Plot size: <u>30' radius</u> )			
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant  
Species Across All Strata: 1 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	<u>0</u> x 1 =	<u>0</u>
FACW species	<u>100</u> x 2 =	<u>200</u>
FAC species	<u>0</u> x 3 =	<u>0</u>
FACU species	<u>0</u> x 4 =	<u>0</u>
UPL species	<u>0</u> x 5 =	<u>0</u>
Column Totals:	<u>100</u> (A)	<u>200</u> (B)
Prevalence Index = B/A =		<u>2</u>

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation  
Present?

Yes X No     

Remarks: Presence of all FACW vegetation indicates hydrophytic vegetation dominance.



SOIL							Sampling Point: 3-2x	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10 YR 3/2	100					Clay loam	Roots present
4-8	7.5 YR 3/4	95	2.5 YR 2.5/4	5	C	M	Clay loam	Rock fill present
8-16	10 YR 2/1	92	2.5 YR 2.5/4	8	C	M	Clay loam	Prominent redox concentrations
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)		Indicators for Problematic Hydric Soils <sup>3</sup> : <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)					
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)					
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> Stratified Layers (A5) (LRR C)			<input type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input checked="" type="checkbox"/>		<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
					<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.			
Restrictive Layer (if present):					Hydric Soil Present?			
Type: <input type="checkbox"/> None					Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Depth (inches): <input type="checkbox"/> N/A								
Remarks: Hydric soil evidenced by indicator F6 (redox dark surface) by having a layer that is at least 4 inches thick starting within 8 inches of the soil surface and has a matrix value of 3 or less and a chroma of 1 or less with at least 2% redox concentrations occurring as soft masses.								
HYDROLOGY								
Wetland Hydrology Indicators:					Secondary Indicators (2 or more required)			
Primary Indicators (minimum of one required; check all that apply)					<input type="checkbox"/> Water Marks (B1) (Riverine)			
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Sediment Deposits (B2) (Riverine)			
<input checked="" type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Drift Deposits (B3) (Riverine)			
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Water Marks (B1) (Nonriverine)			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)			<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)			
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
Field Observations:					Wetland Hydrology Present?			
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	<input type="checkbox"/> 0	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Water Table Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	<input type="checkbox"/> 10				
Saturation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	<input type="checkbox"/> 8				
(includes capillary fringe)								
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks: High water table present at 10 inches and saturation present at 8 inches (less than 12 inches) indicating Primary hydrology.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 4-2x Feature ID: U01-2x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/10/2020  
 Investigator(s): M. Oats, B. Cohen Section, Township, Range: 45N, 14E, 8  
 Local relief (hillside, terrace, etc.): Roadside Local Relief (concave, convex, none): Convex Slope (%): 3  
 Subregion (LRR): D Lat: 41.7485 Long: -120.3757 Datum: NAD 83  
 Soil Map Unit Name: Drews Clay Loam, wet, 0 to 2 percent slopes NWI classification: Seasonal wetland/ FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x  
 Hydric Soil Present? Yes      No x  
 Wetland Hydrology Present? Yes      No x  
 Is the Sampled Area within a Wetland? Yes      No x

Remarks: Upland pair point to W01-2x, all three wetland parameters were not met.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)				
1				
2				
3				
4				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: 5' radius)				
1				
2				
3				
4				
5				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5' radius)				
1 Elytra	Elymus trachycaulus	85	YES	FACU
2 Phaaru	Phalaris arundinacea	10	NO	FACW
3				
4				
5				
6				
7				
8				
9				
10				
11				
		95	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: 30' radius)				
1				
2				
		0	= Total Cover	

%Bare Ground in Herb Stratum: 20 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	0	x 1 = 0
FACW species	10	x 2 = 20
FAC species	0	x 3 = 0
FACU species	85	x 4 = 340
UPL species	0	x 5 = 0
Column Totals:	95 (A)	360 (B)
Prevalence Index = B/A =		3.7895

### Hydrophytic Vegetation Indicators:

No 1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Hydrophytic vegetation was not dominant at upland point.

SOIL		Sampling Point: 4-2x				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
0-2	10 YR 2/1	100			Loam	
2-12	7.5 YR 3/3	100			Loam	Rocky, woody debris
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.				<sup>4</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>				<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histosol (A1)		<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Black Histic (A3)		<input type="checkbox"/> Loamy Mucky Mineral (F1)		<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Hydrogen Sulfide (A4)		<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )		<input type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )		<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)		<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Thick Dark Surface (A12)		<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)		<input type="checkbox"/> Vernal Pools (F9)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)						
<b>Restrictive Layer (if present):</b>			<b>Hydric Soil Present?</b>			
Type: <u>Rock fill</u>			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Depth (inches): <u>12</u>						
<b>Remarks:</b> Hydric soil indicators were not observed.						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>			<b>Secondary Indicators (2 or more required)</b>			
Primary Indicators (minimum of one required; check all that apply)						
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>			<b>Wetland Hydrology Present?</b>			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </u>			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </u>						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </u> (includes capillary fringe)						
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> Wetland hydrology indicators were not observed.						

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Feature ID: W3-2x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/10/2020  
 Investigator(s): M. Oats, B. Cohen Section, Township, Range: 45N, 14E, 17  
 Local relief (hillside, terrace, etc.): Valley floor Local Relief (concave, convex, none): concave Slope (%): 1  
 Subregion (LRR): D Lat: 41.7387 Long: -120.3758 Datum: NAD 83  
 Soil Map Unit Name: Lakeview Loam, 0 to 2 percent slopes NWI classification: Seasonal wetland/FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No       
 Is the Sampled Area within a Wetland? Yes x No     

Remarks: All three wetland indicators present, indicating a wetland sample point.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30' radius</u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>5' radius</u> )				
1				
2				
3				
4				
5				
		<u>0</u>	= Total Cover	

Herb Stratum (Plot size: <u>5' radius</u> )				
1 <u>Phaar</u>	<u>Phalaris arundinacea</u>	<u>70</u>	<u>YES</u>	<u>FACW</u>
2 <u>Alopra</u>	<u>Alopecurus pratensis</u>	<u>40</u>	<u>YES</u>	<u>FACW</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>110</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>30' radius</u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>110</u>	x 2 = <u>220</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>110</u> (A)	<u>220</u> (B)
Prevalence Index = B/A = <u>2</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Presence of all FACW vegetation indicates hydrophytic vegetation dominance.

SOIL							Sampling Point: 13-2x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 2/1	100					Loamy clay	Roots present
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input checked="" type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: _____ None								
Depth (inches): _____ N/A						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Dark soil may be obscuring redox. Soils are problematic and assumed hydric due to regional lack of hydric soil indicators and dark soil matrix color. Sample area is in a concave position and may be seasonally inundated indicating Seasonally Ponded Soils (Chapter 5).								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input checked="" type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Two secondary indicators present (saturation visible on aerial imagery, FAC-Neutral test). Saturation not present, soils are damp.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 14-2x Feature ID: U3-2x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/10/2020  
 Investigator(s): M. Oats, B. Cohen Section, Township, Range: 45N, 14E, 17  
 Local relief (hillside, terrace, etc.): Roadside Local Relief (concave, convex, none): Convex Slope (%): 3  
 Subregion (LRR): D Lat: 41.7387 Long: -120.3758 Datum: NAD 83  
 Soil Map Unit Name: Lakeview Loam, 0 to 2 percent slopes NWI classification: Seasonal Wetland/FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W03-2x, all three wetland parameters were not met.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: <u>30' radius</u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

<b>Sapling/Shrub Stratum</b> (Plot size: <u>5' radius</u> )				
1				
2				
3				
4				
5				
		<u>0</u>	= Total Cover	

<b>Herb Stratum</b> (Plot size: <u>5' radius</u> )				
1	<u>Elyely</u>	<u>Elymus elymoides</u>	<u>85</u>	<u>YES</u>
2	<u>Phaaruru</u>	<u>Phalaris arundinacea</u>	<u>20</u>	<u>NO</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>105</u>	= Total Cover	

<b>Woody Vine Stratum</b> (Plot size: <u>30' radius</u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>20</u>	x 2 =	<u>40</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>85</u>	x 4 =	<u>340</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>105</u> (A)		<u>380</u> (B)
Prevalence Index = B/A = <u>3.619</u>		

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Hydrophytic vegetation was not dominant at upland point.

SOIL							Sampling Point: 14-2x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10 YR 3/3	100					Loam	Roots present
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: <u>Roadbase</u>								
Depth (inches): <u>6</u>						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Hydric soil indicators were not observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>        </u>						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>        </u>						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>        </u>						
(includes capillary fringe)						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Wetland hydrology indicators were not observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Feature ID: W4-2x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/10/2020  
 Investigator(s): M. Oats, B. Cohen Section, Township, Range: 45N, 14E, 17  
 Local relief (hillside, terrace, etc.): Roadside depression Local Relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): D Lat: 41.7338 Long: -120.3754 Datum: NAD 83  
 Soil Map Unit Name: Salisbury Gravelly Loam, 0 to 9 percent slopes NWI classification: Seasonal wetland/FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: All three wetland indicators present. Positive Alpha Alpha Dipyrldyl test and hydrogen sulfide detected.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: <u>30'</u> radius )	% Cover	Species?	Status
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum	(Plot size: <u>5'</u> radius )			
1	<u>Roscal</u>	<u>Rosa californica</u>	<u>20</u>	<u>YES</u> <u>FAC</u>
2				
3				
4				
5				
		<u>20</u>	= Total Cover	

Herb Stratum	(Plot size: <u>5'</u> radius )			
1	<u>Typlat</u>	<u>Typha latifolia</u>	<u>50</u>	<u>YES</u> <u>OBL</u>
2	<u>Vertha</u>	<u>Verbascum thapsus</u>	<u>5</u>	<u>NO</u> <u>FACU</u>
3	<u>Phaaru</u>	<u>Phalaris arundinacea</u>	<u>35</u>	<u>YES</u> <u>FACW</u>
4				
5				
6				
7				
8				
9				
10				
11				
		<u>90</u>	= Total Cover	

Woody Vine Stratum	(Plot size: <u>30'</u> radius )			
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 10 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant  
Species Across All Strata: 3 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	<u>50</u> x 1 = <u>50</u>
FACW species	<u>35</u> x 2 = <u>70</u>
FAC species	<u>20</u> x 3 = <u>60</u>
FACU species	<u>5</u> x 4 = <u>20</u>
UPL species	<u>0</u> x 5 = <u>0</u>
Column Totals:	<u>110</u> (A) <u>200</u> (B)
Prevalence Index = B/A = <u>1.8182</u>	

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation  
Present?

Yes X No     

Remarks: Presence of dominant OBL and FACW vegetation indicates hydrophytic vegetation dominance.



SOIL							Sampling Point: 17-2x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 2/2	100					Clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input checked="" type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input checked="" type="checkbox"/> Other (Explain in Remarks)		
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b>					<b>Hydric Soil Present?</b>			
Type: _____ None Depth (inches): _____ N/A					Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
<b>Remarks:</b> Dark soil may be obscuring redox. Sample area is in concave position with primary hydrology and a dominance of hydrophytic vegetation. Hydrogen sulfide was detected when digging soil pit and a positive test was confirmed with Alpha-Alpha dipyridyl strips.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>			
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input checked="" type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input checked="" type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)			<input checked="" type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)		<input checked="" type="checkbox"/> Other (Explain in Remarks)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): _____ 6						
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): _____ 0						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Primary indicators present with water table and saturation within 12 inches of the soil surface and there was a hydrogen sulfide odor when digging soil pit. Also, an alpha-alpha-dipyridyl test was performed on the soil ped and was positive (turned pink within 30 seconds of application). In addition sample area shows saturation on aerial imagery and passes FAC-neutral test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 18-2x Feature ID: U4-2x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/10/2020  
 Investigator(s): M. Oats, B. Cohen Section, Township, Range: 45N, 14E, 17  
 Local relief (hillside, terrace, etc.): Roadside slope Local Relief (concave, convex, none): Convex Slope (%): 3  
 Subregion (LRR): D Lat: 41.7338 Long: -120.3754 Datum: NAD 83  
 Soil Map Unit Name: Salisbury Gravelly Loam, 0 to 9 percent slopes NWI classification: Seasonal wetland/FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W4-2x, all three wetland parameters were not met.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: <u>30' radius</u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

<b>Sapling/Shrub Stratum</b> (Plot size: <u>5' radius</u> )				
1 <u>Roscal</u>	<u>Rosa californica</u>	<u>20</u>	<u>YES</u>	<u>FAC</u>
2				
3				
4				
5				
		<u>20</u>		= Total Cover

<b>Herb Stratum</b> (Plot size: <u>5' radius</u> )				
1 <u>Poasec</u>	<u>Poa secunda</u>	<u>70</u>	<u>YES</u>	<u>FACU</u>
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>70</u>		= Total Cover

<b>Woody Vine Stratum</b> (Plot size: <u>30' radius</u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant  
Species Across All Strata: 2 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 50% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	<u>0</u> x 1 =	<u>0</u>
FACW species	<u>0</u> x 2 =	<u>0</u>
FAC species	<u>20</u> x 3 =	<u>60</u>
FACU species	<u>70</u> x 4 =	<u>280</u>
UPL species	<u>0</u> x 5 =	<u>0</u>
Column Totals:	<u>90</u> (A)	<u>340</u> (B)
Prevalence Index = B/A =		<u>3.7778</u>

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation  
Present?

Yes      No X

Remarks: Hydrophytic vegetation was not dominant at upland point.

SOIL							Sampling Point: 18-2x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	10 YR 3/2	100					Loam	Gravel throughout
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: Roadbase								
Depth (inches): 12						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Hydric soil indicators were not observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches):						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches):						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches):						
(includes capillary fringe)						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Wetland hydrology indicators were not observed.								

**Remarks:** Presence of dominant FACW vegetation indicates hydrophytic vegetation dominance.

SOIL							Sampling Point: 24-2x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features					
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-7	10 YR 3/1	100					Clay loam	
7-17	10 YR 3/1	95	5 YR 3/4	5	C	M	Clay loam	Prominent Redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)					
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)					
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b> Type: <u>None</u> Depth (inches): <u>N/A</u>						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Hydric soil evidenced by indicator F6 by having a soil layer that starts within 8 inches of the mineral soil surface and is at least 4 inches thick with a matrix value of 3 or less and a value of 1 or less with at least 2 percent prominent redox concentrations occurring as soft masses.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)						Secondary Indicators (2 or more required)		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input checked="" type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>        </u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>  								
<b>Remarks:</b> Wetland hydrology indicators present as there is a presence of high water table (6"), and saturation to the surface as well as two secondary indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 25-2x Feature ID: U5-2x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/11/2020  
 Investigator(s): M. Oats, B. Cohen Section, Township, Range: 45N, 14E, 32  
 Local relief (hillside, terrace, etc.): Roadside slope Local Relief (concave, convex, none): Convex Slope (%): 4  
 Subregion (LRR): D Lat: 41.6926 Long: -120.3754 Datum: NAD 83  
 Soil Map Unit Name: Bieber Gravelly Loam, 0 to 9 percent slopes NWI classification: Wetland swale/FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W5-2x, no wetland parameters were observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: <u>30' radius</u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

<b>Sapling/Shrub Stratum</b> (Plot size: <u>5' radius</u> )				
1				
2				
3				
4				
5				
		<u>0</u>		= Total Cover

<b>Herb Stratum</b> (Plot size: <u>5' radius</u> )				
1	<u>Poasec</u>	<u>Poa secunda</u>	<u>80</u>	<u>YES</u> <u>FACU</u>
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>80</u>		= Total Cover

<b>Woody Vine Stratum</b> (Plot size: <u>30' radius</u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 20 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>80</u>	x 4 = <u>320</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>80</u> (A)	<u>320</u> (B)
Prevalence Index = B/A = <u>4</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes      No X

Remarks: Hydrophytic vegetation was not dominant at upland point.

SOIL							Sampling Point: 25-2x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	7.5 YR 3/3	100					Loam	
12-16	10 YR 2/2	85					Clay loam	
12-16	7.5 YR 3/3	15					Loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)					
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)					
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b> Type: _____ None Depth (inches): _____ N/A						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X		
<b>Remarks:</b> Hydric soil indicators were not observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)						Secondary Indicators (2 or more required)		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X      Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X      Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X      Depth (inches): _____ (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Wetland hydrology indicators were not observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 26-2x Feature ID: W6-2x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/11/2020  
 Investigator(s): M. Oats, B. Cohen Section, Township, Range: 45N, 14E, 32  
 Local relief (hillside, terrace, etc.): Valley floor Local Relief (concave, convex, none): concave Slope (%): 0  
 Subregion (LRR): D Lat: 41.691 Long: -120.3755 Datum: NAD 83  
 Soil Map Unit Name: Pit Silty Clay Loam, 0 to 2 percent slopes NWI classification: Wetland swale/FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No       
 Is the Sampled Area within a Wetland? Yes x No     

Remarks: All three wetland indicators present. Soils are problematic and assumed hydric, see soil remarks. Sample location is the wetland boundary.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)				
1				
2				
3				
4				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: 5' radius)				
1				
2				
3				
4				
5				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5' radius)				
1	<u>Leytri</u> <u>Leymus triticoides</u>	<u>95</u>	<u>YES</u>	<u>FAC</u>
2	<u>Rumcri</u> <u>Rumex crispus</u>	<u>5</u>	<u>NO</u>	<u>FAC</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		100	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: 30' radius)				
1				
2				
		0	= Total Cover	

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>100</u>	x 3 =	<u>300</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>100</u> (A)		<u>300</u> (B)
Prevalence Index = B/A =		<u>3</u>

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Presence of dominant FAC vegetation indicates hydrophytic vegetation dominance.



SOIL							Sampling Point:	
26-2x								
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	10 YR 2/2	100					Clay loam	
3-16	10 YR 2/1	100					Clay	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Indicators for Problematic Hydric Soils <sup>3</sup> :				
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )				
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )				
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Reduced Vertic (F18)				
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Red Parent Material (TF2)				
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)	<input checked="" type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
Restrictive Layer (if present):				Hydric Soil Present?				
Type:	None			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Depth (inches):	N/A							
Remarks: Soils are problematic and assumed hydric due a dominance of hydrophytic vegetation and the presence of primary and secondary hydrology indicators within a concave position. There is also a regional lack of hydric soil indicators within wetland areas and the dark coloration of the matrix in the soil (2/2 and 2/1) may obscure redox features.								
HYDROLOGY								
Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)				
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )				
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )				
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)	<input checked="" type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )				
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)				
Field Observations:				Wetland Hydrology Present?				
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):					
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches): 8					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks: Wetland hydrology indicators present as there is a presence of saturation at 8" from the surface. A secondary indicator of drainage patterns is also present.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Feature ID: U6-2x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/11/2020  
 Investigator(s): M. Oats, B. Cohen Section, Township, Range: 45N, 14E, 32  
 Local relief (hillside, terrace, etc.): Roadside slope Local Relief (concave, convex, none): Convex Slope (%): 7  
 Subregion (LRR): D Lat: 41.691 Long: -120.3755 Datum: NAD 83  
 Soil Map Unit Name: Pit Silty Clay Loam, 0 to 2 percent slopes NWI classification: Wetland swale/FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x  
 Hydric Soil Present? Yes      No x  
 Wetland Hydrology Present? Yes      No x  
 Is the Sampled Area within a Wetland? Yes      No x

Remarks: Upland pair point to W6-2x, no wetland parameters were observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)				
1				
2				
3				
4				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: 5' radius)				
1				
2				
3				
4				
5				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5' radius)				
1	Agrcr <i>Agropyron cristatum</i>	60	YES	UPL
2	Tradub <i>Tragopogon dubius</i>	5	NO	UPL
3	Poasec <i>Poa secunda</i>	15	NO	FACU
4				
5				
6				
7				
8				
9				
10				
11				
		80	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: 30' radius)				
1				
2				
		0	= Total Cover	

%Bare Ground in Herb Stratum: 20 % Cover of Biotic Crust:     

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	15	x 4 = 60
UPL species	65	x 5 = 325
Column Totals:	80	(A) 385 (B)
Prevalence Index = B/A =		4.8125

## Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation No  
 2 - Dominance Test is >50% No  
 3 - Prevalence Index is ≤3.0<sup>1</sup> No  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Hydrophytic vegetation was not dominant at upland point.

SOIL							Sampling Point: 27-2x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	10 YR 3/3	100					Loam	Gravel throughout
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: Roadbase								
Depth (inches): 12						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Hydric soil indicators were not observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches):						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches):						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches):						
(includes capillary fringe)						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Wetland hydrology indicators were not observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 29-2x Feature ID: W7-2x  
Applicant/Owner: Zayo Group State: California Sampling Date: 3/11/2020  
Investigator(s): M. Oats, B. Cohen Section, Township, Range: 44N, 14E, 5  
Local relief (hillside, terrace, etc.): Valley floor Local Relief (concave, convex, none): Concave Slope (%): 1  
Subregion (LRR): D Lat: 41.6847 Long: -120.3777 Datum: NAD 83  
Soil Map Unit Name: Drews Clay Loam, 2 to 5 percent slopes NWI classification: Seasonal Wetland/FEW  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
Hydric Soil Present? Yes x No       
Wetland Hydrology Present? Yes x No       
Is the Sampled Area within a Wetland? Yes x No     

Remarks: All three wetland indicators present, sample area confirmed as wetland.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)				
1				
2				
3				
4				
		0		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: 5' radius)				
1				
2				
3				
4				
5				
		0		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5' radius)				
1	Carneb	95	YES	OBL
2	Leytri	5	NO	FAC
3				
4				
5				
6				
7				
8				
9				
10				
11				
		100		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: 30' radius)				
1				
2				
		0		= Total Cover

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	95	x 1 = 95
FACW species	0	x 2 = 0
FAC species	5	x 3 = 15
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	100 (A)	110 (B)
Prevalence Index = B/A =		1.1

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
5 - Wetland Non-Vascular Plants<sup>1</sup>  
6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Presence of dominant OBL vegetation indicates hydrophytic vegetation dominance.

SOIL							Sampling Point: 29-2x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10 YR 3/1	100					Clay loam	Thick rhizome roots
4-16	10 YR 2/1	98	7.5 YR 3/4	2	C	PL	Clay	Prominent redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: _____ None								
Depth (inches): _____ N/A						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Hydric soil evidenced by indicator F6 by soil having a layer that is at least 4 inches thick starting within 8 inches of the mineral soil surface with a matrix value of 3 or less and a chroma of 1 or less with at least 2 percent prominent redox concentrations occurring as pore linings within the soil.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input checked="" type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): 2				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Wetland hydrology indicators present as there is a presence of saturation at 2" from the surface and there are water stained leaves. In addition two secondary indicators (drainage patterns and FAC-neutral test) were observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 30-2x Feature ID: U7-2x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/11/2020  
 Investigator(s): M. Oats, B. Cohen Section, Township, Range: 44N, 14E, 5  
 Local relief (hillside, terrace, etc.): Roadside slope Local Relief (concave, convex, none): Convex Slope (%): 8  
 Subregion (LRR): D Lat: 41.6847 Long: -120.3777 Datum: NAD 83  
 Soil Map Unit Name: Drews Clay Loam, 2 to 5 percent slopes NWI classification: FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

**Remarks:** Upland pair point to W7-2x, two wetland parameters were not met. There is an assumed FAC species that makes a dominance of hydrophytic vegetation (see remarks below).

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: <u>30' radius</u> )				
1				
2				
3				
4				
		<u>0</u>		

<b>Sapling/Shrub Stratum</b> (Plot size: <u>5' radius</u> )				
1				
2				
3				
4				
5				
		<u>0</u>		

<b>Herb Stratum</b> (Plot size: <u>5' radius</u> )				
1	<u>Elymus sp</u>	<u>Elymus species</u>	<u>80</u>	<u>YES</u>
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>80</u>		

<b>Woody Vine Stratum</b> (Plot size: <u>30' radius</u> )				
1				
2				
		<u>0</u>		

%Bare Ground in Herb Stratum: 20 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	<u>0</u> x 1 =	<u>0</u>
FACW species	<u>0</u> x 2 =	<u>0</u>
FAC species	<u>80</u> x 3 =	<u>240</u>
FACU species	<u>0</u> x 4 =	<u>0</u>
UPL species	<u>0</u> x 5 =	<u>0</u>
Column Totals:	<u>80</u> (A)	<u>240</u> (B)
Prevalence Index = B/A =		<u>3</u>

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes X No     

**Remarks:** No grass heads to ID species, however it is an Elymus. Because species could not be discerned, we assume a FAC species. Therefore, there is a dominance of hydrophytic vegetation.

<b>SOIL</b>		Sampling Point: 30-2x				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
0-12	10 YR 3/3	100			Clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.			<sup>4</sup> Location: PL=Pore Lining, M=Matrix.			
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
				<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<b>Restrictive Layer (if present):</b>			<b>Hydric Soil Present?</b>			
Type: <u>Roadbase</u> Depth (inches): <u>12</u>			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
<b>Remarks:</b> Hydric soil indicators were not observed.						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>			<b>Secondary Indicators (2 or more required)</b>			
Primary Indicators (minimum of one required; check all that apply)						
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>			<b>Wetland Hydrology Present?</b>			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> Wetland hydrology indicators were not observed.						

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 31-2x Feature ID: W8-2x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/11/2020  
 Investigator(s): M. Oats, B. Cohen Section, Township, Range: 44N. 14E, 05  
 Local relief (hillside, terrace, etc.): Valley floor Local Relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): D Lat: 41.6816 Long: -120.3794 Datum: NAD 83  
 Soil Map Unit Name: Pit Silty Clay Loam, 0 to 2 percent slopes NWI classification: FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No       
 Is the Sampled Area within a Wetland? Yes x No     

Remarks: All three wetland indicators present. Soils are problematic and assumed hydric, see soil remarks.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: 30' radius )	% Cover	Species?	Status
1				
2				
3				
4				
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: 5' radius )			
1				
2				
3				
4				
5				
		0	= Total Cover	
Herb Stratum	(Plot size: 5' radius )			
1	Leytri	95	YES	FAC
2	Leymus triticoides			
3				
4				
5				
6				
7				
8				
9				
10				
11				
		95	= Total Cover	
Woody Vine Stratum	(Plot size: 30' radius )			
1				
2				
		0	= Total Cover	

%Bare Ground in Herb Stratum: 10 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>95</u>	x 3 = <u>285</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>95</u> (A)	<u>285</u> (B)
Prevalence Index = B/A = <u>3</u>	

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Presence of dominant FAC vegetation indicates hydrophytic vegetation dominance.



<b>SOIL</b>							Sampling Point: 31-2x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 2/1	85					Clay loam	Roots throughout
	10 YR 3/2	15						

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.
<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input checked="" type="checkbox"/> Other (Explain in Remarks)
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<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_ None  
 Depth (inches): \_\_\_\_\_ N/A

**Hydric Soil Present?**  
 Yes ☒ No ☐

**Remarks:** Dark soil matrix color may be obscuring redox features. The site is in a concave position and has a dominance of hydrophytic vegetation and has a primary and secondary indicator of hydrology therefore soils are assumed hydric. The site is assumed to have Seasonally Ponded Soils and the region lacks redox features in wetland areas.

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (2 or more required)</b>
<b>Primary Indicators (minimum of one required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)

**Field Observations:**  
 Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

**Wetland Hydrology Present?**  
 Yes ☒ No ☐

**Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:** Wetland hydrology indicators present as there is some water stained leaves and there is a secondary indicator of drainage patterns.

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 32-2x Feature ID: U8-2x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/11/2020  
 Investigator(s): M. Oats, B. Cohen Section, Township, Range: 44N. 14E, 05  
 Local relief (hillside, terrace, etc.): Roadside slope Local Relief (concave, convex, none): Convex Slope (%): 5  
 Subregion (LRR): D Lat: 41.6816 Long: -120.3794 Datum: NAD 83  
 Soil Map Unit Name: Pit Silty Clay Loam, 0 to 2 percent slopes NWI classification: FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W8-2x, no wetland parameters were observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: <u>30' radius</u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

<b>Sapling/Shrub Stratum</b> (Plot size: <u>5' radius</u> )				
1				
2				
3				
4				
5				
		<u>0</u>		= Total Cover

<b>Herb Stratum</b> (Plot size: <u>5' radius</u> )				
1	<u>Elymus sp</u>	<u>Elymus species</u>	<u>60</u>	<u>YES</u> <u>FAC</u>
2	<u>Elycap</u>	<u>Elymus caput-medusae</u>	<u>20</u>	<u>YES</u> <u>UPL</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>80</u>		= Total Cover

<b>Woody Vine Stratum</b> (Plot size: <u>30' radius</u> )				
1				
2				
		<u>0</u>		= Total Cover

% Bare Ground in Herb Stratum: 20 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	60	x 3 = 180
FACU species	0	x 4 = 0
UPL species	20	x 5 = 100
Column Totals:	<u>80</u> (A)	<u>280</u> (B)
Prevalence Index = B/A =		<u>3.5</u>

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes      No X

Remarks: No grass heads to ID species, however it is an Elymus. Because species could not be discerned, we assume a FAC species. However, due to the Elymus caput-medusae, there is not a dominance of hydrophytic vegetation.

SOIL							Sampling Point: 32-2x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-10	10 YR 3/2	40					Loam	
	10 YR 4/3	60						
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: Roadbase								
Depth (inches): 10						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Hydric soil indicators were not observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches):						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches):						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches):				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Wetland hydrology indicators were not observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 37-2x Feature ID: W9-2x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/11/2020  
 Investigator(s): M. Oats, B. Cohen Section, Township, Range: 44N, 14E, 08  
 Local relief (hillside, terrace, etc.): Drainage terrace Local Relief (concave, convex, none): None Slope (%): 2  
 Subregion (LRR): D Lat: 41.6712 Long: -120.3849 Datum: NAD 83  
 Soil Map Unit Name: Pit Silty Clay Loam, 0 to 2 percent slopes NWI classification: FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: All three wetland indicators present.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: <u>30' radius</u> )				
1				
2				
3				
4				
		<u>0</u>		

<b>Sapling/Shrub Stratum</b> (Plot size: <u>5' radius</u> )				
1				
2				
3				
4				
5				
		<u>0</u>		

<b>Herb Stratum</b> (Plot size: <u>5' radius</u> )				
1	<u>Carneb</u>	<u>Carex nebrascensis</u>	<u>100</u>	<u>YES</u>
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>100</u>		

<b>Woody Vine Stratum</b> (Plot size: <u>30' radius</u> )				
1				
2				
		<u>0</u>		

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>100</u>	x 1 = <u>100</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>100</u> (B)
Prevalence Index = B/A = <u>1</u>	

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Presence of dominant OBL vegetation indicates hydrophytic vegetation dominance.

SOIL		Sampling Point: 37-2x						
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features		Texture	Remarks		
	Color (moist)	%	Color (moist)	%				
0-14	10 YR 3/1	98	7.5 YR 4/3	2	C	M	Clay	Distinct Redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.					<sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)		<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Stripped Matrix (S6)						
<input type="checkbox"/> Black Histic (A3)		<input type="checkbox"/> Loamy Mucky Mineral (F1)						
<input type="checkbox"/> Hydrogen Sulfide (A4)		<input type="checkbox"/> Loamy Gleyed Matrix (F2)						
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )		<input type="checkbox"/> Depleted Matrix (F3)						
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )		<input checked="" type="checkbox"/> Redox Dark Surface (F6)						
<input type="checkbox"/> Depleted Below Dark Surface (A11)		<input type="checkbox"/> Depleted Dark Surface (F7)						
<input type="checkbox"/> Thick Dark Surface (A12)		<input type="checkbox"/> Redox Depressions (F8)						
<input type="checkbox"/> Sandy Mucky Mineral (S1)		<input type="checkbox"/> Vernal Pools (F9)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b>					<b>Hydric Soil Present?</b>			
Type: <u>None</u> Depth (inches): <u>N/A</u>					Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
<b>Remarks:</b> Hydric soil evidenced by indicator F6 by having a layer that is at least 4 inches thick starting within 8 inches of the mineral soil surface and has a matrix value of 3 or less and a chroma of 1 or less with at least 2 percent distinct redox concentrations occurring as soft masses.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>			
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )				
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )				
<input checked="" type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )				
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)				
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>						
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>1</u>						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Wetland hydrology indicators present as there is a presence of saturation 1 inch below the surface and sample area meets FAC-Neutral Test.								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 38-2x Feature ID: U9-2x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/11/2020  
 Investigator(s): M. Oats, B. Cohen Section, Township, Range: 44N, 14E, 08  
 Local relief (hillside, terrace, etc.): Roadside slope Local Relief (concave, convex, none): Convex Slope (%): 5  
 Subregion (LRR): D Lat: 41.6712 Long: -120.3849 Datum: NAD 83  
 Soil Map Unit Name: Pit Silty Clay Loam, 0 to 2 percent slopes NWI classification: FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☐ No ☒  
 Hydric Soil Present? Yes ☐ No ☒  
 Wetland Hydrology Present? Yes ☐ No ☒  
 Is the Sampled Area within a Wetland? Yes ☐ No ☒

Remarks: Upland pair point to W9-2x, no wetland parameters were observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)				
1				
2				
3				
4				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: 5' radius)				
1				
2				
3				
4				
5				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: 5' radius)				
1 Thiint	Thinopyrum intermedium	50	YES	UPL
2 Cirarv	Cirsium arvense	15	NO	FACU
3 Lophragma	Lithophragma species	10	NO	UPL
4 Elycap	Elymus caput-medusae	10	NO	UPL
5				
6				
7				
8				
9				
10				
11				
		85	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: 30' radius)				
1				
2				
		0	= Total Cover	

% Bare Ground in Herb Stratum: 15 % Cover of Biotic Crust: \_\_\_\_\_

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species 0	x 1 =	0
FACW species 0	x 2 =	0
FAC species 0	x 3 =	0
FACU species 15	x 4 =	60
UPL species 70	x 5 =	350
Column Totals: 85 (A)		410 (B)
Prevalence Index = B/A = 4.8235		

## Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation ☐ No  
 2 - Dominance Test is >50% ☐ No  
 3 - Prevalence Index is ≤3.0<sup>1</sup> ☐ No  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks: No dominance of hydrophytic vegetation observed.

SOIL							Sampling Point: 38-2x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10 YR 2/1	50					Loam	
	10 YR 3/3	50						
6-12	10 YR 2/1	100					Loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b>					<b>Hydric Soil Present?</b>			
Type: Roadbase					Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Depth (inches): 12								
<b>Remarks:</b> Hydric soil indicators were not observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>			
<b>Primary Indicators (minimum of one required; check all that apply)</b>					<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input type="checkbox"/> Surface Water (A1)					<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input type="checkbox"/> High Water Table (A2)					<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Saturation (A3)					<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )					<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )					<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )					<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Surface Soil Cracks (B6)					<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)					<input type="checkbox"/> FAC-Neutral Test (D5)			
<input type="checkbox"/> Water-Stained Leaves (B9)					<input type="checkbox"/> Other (Explain in Remarks)			
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>								
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>								
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Wetland hydrology indicators were not observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Feature ID: W10-2x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/12/2020  
 Investigator(s): M. Oats, B. Cohen Section, Township, Range: 44N, 13E, 25  
 Local relief (hillside, terrace, etc.): Swale Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 41.6205 Long: -120.4116 Datum: NAD 83  
 Soil Map Unit Name: Bieber Gravelly Loam, 0 to 9 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No       
 Is the Sampled Area within a Wetland? Yes x No     

Remarks: All three wetland parameters were observed. Soils are problematic and assumed hydric, see soil remarks.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)				
1				
2				
3				
4				
		0		= Total Cover

Sapling/Shrub Stratum (Plot size: 15' radius)				
1 Roscal	Rosa californica	20	YES	FAC
2 Sallas	Salix lasiandra	10	YES	FACW
3				
4				
5				
		30		= Total Cover

Herb Stratum (Plot size: 5' radius)				
1 Epicil	Epilobium ciliatum	50	YES	FACW
2 Leytri	Leymus triticoides	20	YES	FAC
3				
4				
5				
6				
7				
8				
9				
10				
11				
		70		= Total Cover

Woody Vine Stratum (Plot size: 30' radius)				
1				
2				
		0		= Total Cover

%Bare Ground in Herb Stratum: 30 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>60</u>	x 2 = <u>120</u>
FAC species <u>40</u>	x 3 = <u>120</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>240</u> (B)
Prevalence Index = B/A = <u>2.4</u>	

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Presence of dominant FACW and FAC vegetation indicates hydrophytic vegetation dominance.



SOIL		Sampling Point: 44-2x				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
0-16	10 YR 2/2	100			Clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.			<sup>4</sup> Location: PL=Pore Lining, M=Matrix.			
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						
<input type="checkbox"/> Histosol (A1)		<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input checked="" type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Stripped Matrix (S6)				
<input type="checkbox"/> Black Histic (A3)		<input type="checkbox"/> Loamy Mucky Mineral (F1)				
<input type="checkbox"/> Hydrogen Sulfide (A4)		<input type="checkbox"/> Loamy Gleyed Matrix (F2)				
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )		<input type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )		<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)		<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Thick Dark Surface (A12)		<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)		<input type="checkbox"/> Vernal Pools (F9)				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)						
<b>Restrictive Layer (if present):</b>				<b>Hydric Soil Present?</b>		
Type: <u>None</u>				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Depth (inches): <u>N/A</u>						
<b>Remarks:</b> Dark Soil may be obscuring redox. Soils are problematic and assumed hydric due to the sample area in a concave position with a dominance of hydrophytic vegetation and primary hydrology. The feature is assumed to have Seasonally Ponded Soils.						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)						
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>				<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>				
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>4</u>				
(includes capillary fringe)						
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> Wetland hydrology indicators present as there is a presence of saturation at 4" below the surface and passes FAC-Neutral Test.						

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Feature ID: U10-2x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/12/2020  
 Investigator(s): M. Oats, B. Cohen Section, Township, Range: 44N, 13E, 25  
 Local relief (hillside, terrace, etc.): Hillslope Local Relief (concave, convex, none): None Slope (%): 5  
 Subregion (LRR): D Lat: 41.6205 Long: -120.4116 Datum: NAD 83  
 Soil Map Unit Name: Bieber Gravelly Loam, 0 to 9 percent slopes NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W10-2x, no wetland parameters were observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: <u>30' radius</u> )				
1				
2				
3				
4				
		<u>0</u>		

<b>Sapling/Shrub Stratum</b> (Plot size: <u>5' radius</u> )				
1 <u>Arttri</u>	<u>Artemisia tridentata</u>	<u>10</u>	<u>YES</u>	<u>UPL</u>
2				
3				
4				
5				
		<u>10</u>		

<b>Herb Stratum</b> (Plot size: <u>5' radius</u> )				
1 <u>Leytri</u>	<u>Leymus triticoides</u>	<u>60</u>	<u>YES</u>	<u>FAC</u>
2 <u>Vertha</u>	<u>Verbascum thapsus</u>	<u>5</u>	<u>NO</u>	<u>FACU</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>65</u>		

<b>Woody Vine Stratum</b> (Plot size: <u>30' radius</u> )				
1				
2				
		<u>0</u>		

%Bare Ground in Herb Stratum: 35 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>60</u>	x 3 =	<u>180</u>
FACU species <u>5</u>	x 4 =	<u>20</u>
UPL species <u>10</u>	x 5 =	<u>50</u>
Column Totals: <u>75</u> (A)		<u>250</u> (B)
Prevalence Index = B/A = <u>3.3333</u>		

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes      No X

Remarks: No dominance of hydrophytic vegetation observed.

SOIL		Sampling Point: 45-2x				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
0-12	10 YR 3/2	100			Loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.			<sup>4</sup> Location: PL=Pore Lining, M=Matrix.			
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
				<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<b>Restrictive Layer (if present):</b>				<b>Hydric Soil Present?</b>		
Type: _____ Rock _____ Depth (inches): _____ 12 _____				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Hydric soil indicators were not observed.						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)						
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>				<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____				
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (includes capillary fringe)		Depth (inches): _____				
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> Wetland hydrology indicators were not observed.						

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 46-2x Feature ID: W11-2x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/12/2020  
 Investigator(s): M. Oats, B. Cohen Section, Township, Range: 44N, 13E, 25  
 Local relief (hillside, terrace, etc.): Swale Local Relief (concave, convex, none): Concave Slope (%): 3  
 Subregion (LRR): D Lat: 41.6199 Long: -120.412 Datum: NAD 83  
 Soil Map Unit Name: Modoc Sandy Loam, 0 to 9 percent slopes NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: All three wetland indicators present.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30' radius</u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>15' radius</u> )				
1				
2				
3				
4				
5				
		<u>0</u>	= Total Cover	

Herb Stratum (Plot size: <u>5' radius</u> )				
1 <u>Typlat</u>	<u>Typha latifolia</u>	<u>40</u>	<u>YES</u>	<u>OBL</u>
2 <u>Carneb</u>	<u>Carex nebrascensis</u>	<u>35</u>	<u>YES</u>	<u>OBL</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>75</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>30' radius</u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 25 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>75</u>	x 1 = <u>75</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>75</u> (A)	<u>75</u> (B)
Prevalence Index = B/A = <u>1</u>	

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Presence of dominant OBL vegetation indicates hydrophytic vegetation dominance.

SOIL							Sampling Point: 46-2x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 3/1	96	7.5 YR 4/6	4	C	PL	Loamy clay	Prominent Redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: _____ None								
Depth (inches): _____ N/A						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Hydric soil evidenced by indicator F6 with a layer that is at least 4 inches thick starting within 8 inches of the mineral soil surface and has a matrix value of 3 or less and a chroma of 1 or less with at least 2 percent prominent redox concentrations occurring as pore linings.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>2</u>						
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>0</u>				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Wetland hydrology indicators present as there is a presence of saturation to the surface and a high water table (adjacent to surface water) within 12 inches of the soil surface.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 47-2x Feature ID: U11-2x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/12/2020  
 Investigator(s): M. Oats, B. Cohen Section, Township, Range: 44N, 13E, 25  
 Local relief (hillside, terrace, etc.): Roadslope Local Relief (concave, convex, none): None Slope (%): 5  
 Subregion (LRR): D Lat: 41.6199 Long: -120.412 Datum: NAD 83  
 Soil Map Unit Name: Modoc Sandy Loam, 0 to 9 percent slopes NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W11-2x, no wetland parameters were observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: <u>30' radius</u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

<b>Sapling/Shrub Stratum</b> (Plot size: <u>5' radius</u> )				
1 <u>Erinau</u>	<u>Ericameria nauseosa</u>	<u>10</u>	<u>YES</u>	<u>UPL</u>
2				
3				
4				
5				
		<u>10</u>	= Total Cover	

<b>Herb Stratum</b> (Plot size: <u>5' radius</u> )				
1 <u>Thiint</u>	<u>Thinopyrum intermedium</u>	<u>40</u>	<u>YES</u>	<u>UPL</u>
2 <u>Vertha</u>	<u>Verbascum thapsus</u>	<u>5</u>	<u>NO</u>	<u>FACU</u>
3 <u>Poasec</u>	<u>Poa secunda</u>	<u>20</u>	<u>YES</u>	<u>FACU</u>
4				
5				
6				
7				
8				
9				
10				
11				
		<u>65</u>	= Total Cover	

<b>Woody Vine Stratum</b> (Plot size: <u>30' radius</u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 35 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>25</u>	x 4 =	<u>100</u>
UPL species <u>50</u>	x 5 =	<u>250</u>
Column Totals: <u>75</u> (A)		<u>350</u> (B)
Prevalence Index = B/A = <u>4.6667</u>		

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

No 3 - Prevalence Index is ≤3.0<sup>1</sup>

     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

     5 - Wetland Non-Vascular Plants<sup>1</sup>

     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: No dominance of hydrophytic vegetation observed.

SOIL							Sampling Point: 47-2x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	10 YR 3/3	100					Sandy loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b> Type: _____ Rock _____ Depth (inches): _____ 12 _____						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X		
<b>Remarks:</b> Hydric soil indicators were not observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)						Secondary Indicators (2 or more required)		
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X Depth (inches): _____ (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Wetland hydrology indicators were not observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Feature ID: W12-2x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/13/2020  
 Investigator(s): M. Oats, B. Cohen Section, Township, Range: 43N, 13E, 01  
 Local relief (hillside, terrace, etc.): Terrace Local Relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): D Lat: 41.6014 Long: -120.4231 Datum: NAD 83  
 Soil Map Unit Name: Lorella Loam, 30 to 50 percent slopes NWI classification: FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No       
 Is the Sampled Area within a Wetland? Yes x No     

Remarks: All three wetland indicators present. Soil is problematic and assumed hydric, see soil remarks. Adjacent to river system.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)				
1				
2				
3				
4				
		0		= Total Cover

Sapling/Shrub Stratum (Plot size: 15' radius)				
1 <u>Salexi</u>	<u>Salix exigua</u>	<u>50</u>	<u>YES</u>	<u>FACW</u>
2				
3				
4				
5				
		50		= Total Cover

Herb Stratum (Plot size: 5' radius)				
1 <u>Equarv</u>	<u>Equisetum arvense</u>	<u>25</u>	<u>YES</u>	<u>FAC</u>
2 <u>Poapra</u>	<u>Poa pratensis</u>	<u>30</u>	<u>YES</u>	<u>FAC</u>
3 <u>Aster sp.</u>	<u>Aster species</u>	<u>15</u>	<u>NO</u>	<u>FAC</u>
4 <u>Unk grass</u>	<u>Unknown grass</u>	<u>20</u>	<u>YES</u>	<u>FAC</u>
5				
6				
7				
8				
9				
10				
11				
		90		= Total Cover

Woody Vine Stratum (Plot size: 30' radius)				
1				
2				
		0		= Total Cover

%Bare Ground in Herb Stratum: 10 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>50</u>	x 2 = <u>100</u>
FAC species <u>90</u>	x 3 = <u>270</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>140</u> (A)	<u>370</u> (B)
Prevalence Index = B/A = <u>2.6429</u>	

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Presence of dominant FAC and FACW vegetation indicates hydrophytic vegetation dominance.



SOIL							Sampling Point: 50-2x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 3/2	100					Clay loam	Sand present throughout matrix
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input checked="" type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: _____ None								
Depth (inches): _____ N/A						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Sample area is in a concave position adjacent to a perennial river system. There is dominance of hydrophytic vegetation, and three secondary hydrology indicators. Soil has sandy content adjacent to a perennial river system and may potentially wash out redox features. Soils adjacent to river system maybe recently developed, seasonally ponded, or new wetlands.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input checked="" type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input checked="" type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Wetland hydrology indicators present as there is a presence of riverine drift deposits, drainage patterns, and passes the FAC-neutral test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 51-2x Feature ID: U12-2x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/13/2020  
 Investigator(s): M. Oats, B. Cohen Section, Township, Range: 43N, 13E, 01  
 Local relief (hillside, terrace, etc.): Roadslope Local Relief (concave, convex, none): None Slope (%): 5  
 Subregion (LRR): D Lat: 41.6014 Long: -120.423 Datum: NAD 83  
 Soil Map Unit Name: Lorella Loam, 30 to 50 percent slopes NWI classification: FO/Shrub wetland  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W12-2x, no wetland parameters were observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: <u>30' radius</u> )				
1				
2				
3				
4				
		<u>0</u>		

<b>Sapling/Shrub Stratum</b> (Plot size: <u>5' radius</u> )				
1				
2				
3				
4				
5				
		<u>0</u>		

<b>Herb Stratum</b> (Plot size: <u>5' radius</u> )				
1	<u>Brotec</u>	<u>Bromus tectorum</u>	<u>75</u>	<u>YES</u>
2	<u>Alydes</u>	<u>Alyssum desatorum</u>	<u>20</u>	<u>YES</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>95</u>		

<b>Woody Vine Stratum</b> (Plot size: <u>30' radius</u> )				
1				
2				
		<u>0</u>		

%Bare Ground in Herb Stratum: 5 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>95</u>	x 5 = <u>475</u>
Column Totals: <u>95</u> (A)	<u>475</u> (B)
Prevalence Index = B/A = <u>5</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes      No X

Remarks: No dominance of hydrophytic vegetation observed.

SOIL		Sampling Point: 51-2x				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
0-16	10 YR 3/2	100			Loam	Traces of clay present
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.			<sup>4</sup> Location: PL=Pore Lining, M=Matrix.			
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
				<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<b>Restrictive Layer (if present):</b>				<b>Hydric Soil Present?</b>		
Type: <u>None</u> Depth (inches): <u>N/A</u>				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Hydric soil indicators were not observed.						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)						
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>				<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> Wetland hydrology indicators were not observed.						

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 52-2x Feature ID: W13-2x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/13/2020  
 Investigator(s): M. Oats, B. Cohen Section, Township, Range: 43N, 13E, 01  
 Local relief (hillside, terrace, etc.): Terrace Local Relief (concave, convex, none): Convex Slope (%): 2  
 Subregion (LRR): D Lat: 41.594 Long: -120.4233 Datum: NAD 83  
 Soil Map Unit Name: Daphnedale Stony Loam, 30 to 50 percent slopes NWI classification: Riparian wetland  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: All three wetland indicators present.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: <u>30' radius</u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

<b>Sapling/Shrub Stratum</b> (Plot size: <u>15' radius</u> )				
1 <u>Salexi</u>	<u>Salix exigua</u>	<u>80</u>	<u>YES</u>	<u>FACW</u>
2				
3				
4				
5				
		<u>80</u>	= Total Cover	

<b>Herb Stratum</b> (Plot size: <u>5' radius</u> )				
1 <u>Broine</u>	<u>Bromus inermis</u>	<u>70</u>	<u>YES</u>	<u>FACU</u>
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>70</u>	= Total Cover	

<b>Woody Vine Stratum</b> (Plot size: <u>30' radius</u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 30 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant  
Species Across All Strata: 2 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 50% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>80</u>	x 2 =	<u>160</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>70</u>	x 4 =	<u>280</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>150</u> (A)		<u>440</u> (B)
Prevalence Index = B/A = <u>2.9333</u>		

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation  
Present?

Yes X No     

Remarks: Presence of dominant FACU and FACW vegetation indicates hydrophytic vegetation with a prevalence index of less than 3.

SOIL							Sampling Point: 52-2x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	10 YR 3/2	100					Loam	Roots present throughout
3-12	10 YR 3/1	98	7.5 YR 3/4	2	C	M	Clay loam	Prominent Redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)					
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)					
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b> Type: <u>None</u> Depth (inches): <u>N/A</u>						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Hydric soil evidenced by indicator F6 with a layer that is at least 4 inches thick starting within 8 inches of the mineral soil surface with a matrix value of 3 or less and chroma of 1 or less with at least 2 percent prominent redox concentrations occurring as soft masses.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)						Secondary Indicators (2 or more required)		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input checked="" type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input checked="" type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </u> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </u> (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>  								
<b>Remarks:</b> Wetland hydrology indicators present as there is a presence of riverine drift deposits and drainage patterns.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 53-2x Feature ID: U13-2x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/13/2020  
 Investigator(s): M. Oats, B. Cohen Section, Township, Range: 43N, 13E, 01  
 Local relief (hillside, terrace, etc.): Roadslope Local Relief (concave, convex, none): None Slope (%): 2  
 Subregion (LRR): D Lat: 41.5941 Long: -120.4233 Datum: NAD 83  
 Soil Map Unit Name: Daphnedale Stony Loam, 30 to 50 percent slopes NWI classification: FO/Shrub wetland  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W13-2x, no wetland parameters were observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: <u>30' radius</u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

<b>Sapling/Shrub Stratum</b> (Plot size: <u>5' radius</u> )				
1 <u>Erinau</u>	<u>Ericameria nauseosa</u>	<u>10</u>	<u>YES</u>	<u>UPL</u>
2				
3				
4				
5				
		<u>10</u>	= Total Cover	

<b>Herb Stratum</b> (Plot size: <u>5' radius</u> )				
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>0</u>	= Total Cover	

<b>Woody Vine Stratum</b> (Plot size: <u>30' radius</u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 100 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>10</u>	x 5 = <u>50</u>
Column Totals: <u>10</u> (A)	<u>50</u> (B)
Prevalence Index = B/A = <u>5</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

No 3 - Prevalence Index is ≤3.0<sup>1</sup>

     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

     5 - Wetland Non-Vascular Plants<sup>1</sup>

     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes      No X

Remarks: No dominance of hydrophytic vegetation observed.

SOIL							Sampling Point: 53-2x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 3/2	100					Loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b> Type: _____ None Depth (inches): _____ N/A						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X		
<b>Remarks:</b> Hydric soil indicators were not observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)						Secondary Indicators (2 or more required)		
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X Depth (inches): _____ (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Wetland hydrology indicators were not observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 10-2x Feature ID: NW01-2x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/10/2020  
 Investigator(s): M. Oats, B. Cohen Section, Township, Range: 45N, 14E, 17  
 Local relief (hillside, terrace, etc.): flat field Local Relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR): D Lat: 41.7445 Long: -120.3759 Datum: NAD 83  
 Soil Map Unit Name: Drews Clay Loam, wet, 0 to 2 percent slopes NWI classification: Seasonal wetland/FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Suspect area; however, no wetland parameters were observed in the sample area.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: 30' radius )	% Cover	Species?	Status
1				
2				
3				
4				
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: 5' radius )			
1				
2				
3				
4				
5				
		0	= Total Cover	
Herb Stratum	(Plot size: 5' radius )			
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		0	= Total Cover	
Woody Vine Stratum	(Plot size: 30' radius )			
1				
2				
		0	= Total Cover	

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: #DIV/0! (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>0</u> (A)	<u>0</u> (B)

Prevalence Index = B/A =     

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
  - 2 - Dominance Test is >50%
  - No 3 - Prevalence Index is ≤3.0<sup>1</sup>
  - 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
  - 5 - Wetland Non-Vascular Plants<sup>1</sup>
  - 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Vegetation has been mowed so unable to discern species. Does not appear to be OBL or FACW grasses.



SOIL		Sampling Point: 10-2x						
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-10	10 YR 2/2	100					Clay loam	
10-12	10 YR 2/2	98	2.5 YR 2.5/4	2			Clay loam	prominent redox
12-16	10 YR 2/1	94	2.5 YR 2.5/4	6			Clay loam	prominent redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.								
<sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)								
Histosol (A1)		Sandy Redox (S5)		Indicators for Problematic Hydric Soils <sup>3</sup> :				
Histic Epipedon (A2)		Stripped Matrix (S6)		1 cm Muck (A9) (LRR C)				
Black Histic (A3)		Loamy Mucky Mineral (F1)		2 cm Muck (A10) (LRR B)				
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)		Reduced Vertic (F18)				
Stratified Layers (A5) (LRR C)		Depleted Matrix (F3)		Red Parent Material (TF2)				
1 cm Muck (A9) (LRR D)		Redox Dark Surface (F6)		Other (Explain in Remarks)				
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)						
Thick Dark Surface (A12)		Redox Depressions (F8)						
Sandy Mucky Mineral (S1)		Vernal Pools (F9)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
Sandy Gleyed Matrix (S4)								
Restrictive Layer (if present):					Hydric Soil Present?			
Type: None					Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Depth (inches): N/A								
Remarks: Redox present in deeper layers but does not meet hydric soil indicators.								
HYDROLOGY								
Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)				
Primary Indicators (minimum of one required; check all that apply)								
Surface Water (A1)		Salt Crust (B11)		Water Marks (B1) (Riverine)				
High Water Table (A2)		Biotic Crust (B12)		Sediment Deposits (B2) (Riverine)				
Saturation (A3)		Aquatic Invertebrates (B13)		Drift Deposits (B3) (Riverine)				
Water Marks (B1) (Nonriverine)		Hydrogen Sulfide Odor (C1)		Drainage Patterns (B10)				
Sediment Deposits (B2) (Nonriverine)		Oxidized Rhizospheres along Living Roots (C3)		Dry-Season Water Table (C2)				
Drift Deposits (B3) (Nonriverine)		Presence of Reduced Iron (C4)		Crayfish Burrows (C8)				
Surface Soil Cracks (B6)		Recent Iron Reduction in Tilled Soils (C6)		Saturation Visible on Aerial Imagery (C9)				
Inundation Visible on Aerial Imagery (B7)		Thin Muck Surface (C7)		Shallow Aquitard (D3)				
Water-Stained Leaves (B9)		Other (Explain in Remarks)		FAC-Neutral Test (D5)				
Field Observations:					Wetland Hydrology Present?			
Surface Water Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Water Table Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):					
Saturation Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):					
(includes capillary fringe)								
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks: No hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 48-2x Feature ID: NW02-2x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 3/12/2020

Investigator(s): M. Oats, B. Cohen Section, Township, Range: 43N, 13E, 01  
 Local relief (hillside, terrace, etc.): Riverine floodplain Local Relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): D Lat: 41.6012 Long: -120.423 Datum: NAD 83  
 Soil Map Unit Name: Lorella Loam, 30 to 50 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Non-wetland point has a prevalence of hydrophytic vegetation, dark soils (sandy), and no hydrology indicators.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)				
1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)				
1	Roswoo	Rosa woodsii	15	YES FACU
2				
3				
4				
5				
		15	= Total Cover	

Herb Stratum (Plot size: 5' radius)				
1	Alopra	Alopecurus pratensis	95	YES FACW
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		95	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)				
1				
2				
		0	= Total Cover	

%Bare Ground in Herb Stratum: 5 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	0 x 1 = 0
FACW species	95 x 2 = 190
FAC species	0 x 3 = 0
FACU species	15 x 4 = 60
UPL species	0 x 5 = 0
Column Totals:	110 (A) 250 (B)
Prevalence Index = B/A = 2.2727	

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Presence of dominant FACU & FACW vegetation indicates a prevalence index of hydrophytic vegetation.

SOIL							Sampling Point: 48-2x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	10 YR 2/2	100					Loam	
12-16	10 YR 4/2	100					Sandy loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: _____ None						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Depth (inches): _____ N/A								
<b>Remarks:</b> Hydric soil indicators were not observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No wetland hydrology indicators present.								

# **Arid West Ephemeral and Intermittent Streams OHW M Datasheet**

<b>Sampling Point:</b> <u>25-3x</u>		<b>Feature ID:</b> <u>D18-3x</u>		<b>Date:</b> <u>3/30/2020</u>	
<b>Project:</b> <u>Zayo Fibo optic</u>					
<b>Location:</b> <u>Modoc county</u>			<b>Photo begin/end file#:</b> <u>See Field Photos</u>		
<b>Investigator(s):</b> <u>B. Cohen, M. Oats</u>					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> <u>Lambert</u> <b>Datum:</b> <u>NAD83</u> <b>Coordinates:</b> <u>41.5225, -120.4763</u>			
<b>Potential anthropogenic influences on the channel system:</b> Nearby hwy, bridges, culvert inputs					
<b>Brief site description:</b> Pit River					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </div> </div>					
<p><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other: _____ </div> </div> </li> </ol>					

### Wentworth Size Classes

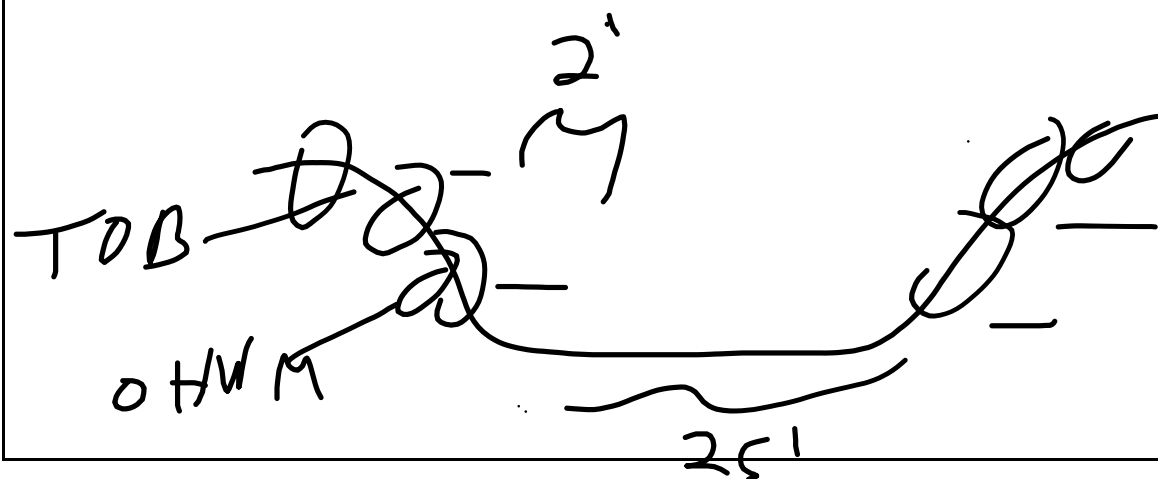
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D18-3x

Cross section ID:

Date: 3/30/2020 Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☒ Other: Root exposure☐ Other: \_\_\_\_\_Comments:Floodplain unit:☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

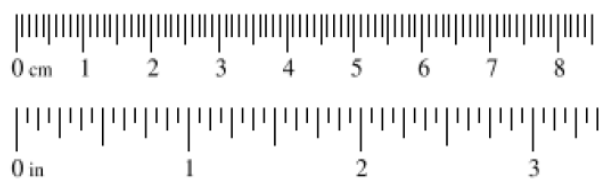
# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 40-3x		<b>Feature ID:</b> D21-3x		<b>Date:</b> 4/1/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> B. Cohen, M. Gould					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.4767, -120.5438			
<b>Potential anthropogenic influences on the channel system:</b> Agriculture and railroad influences.					
<b>Brief site description:</b> Perennial pond likely influenced by agriculture and controlled hydrology.					
<b>Checklist of resources (if available)</b> <input checked="" type="checkbox"/> Aerial photography <input type="checkbox"/> Stream gage data <b>Dates:</b> _____ <b>Gage number:</b> _____ <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Period of record: <input type="checkbox"/> Geologic maps <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Vegetation maps <input type="checkbox"/> Results of flood frequency analysis <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and <input type="checkbox"/> Existing delineation(s) for site the most recent event exceeding a 5-year event <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p> <p style="text-align: center;"><b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b></p> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via: <div style="display: flex; justify-content: space-around;"> <input type="checkbox"/> Mapping on aerial photograph <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Digitized on computer <input type="checkbox"/> Other: </div> </li> </ol>					



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



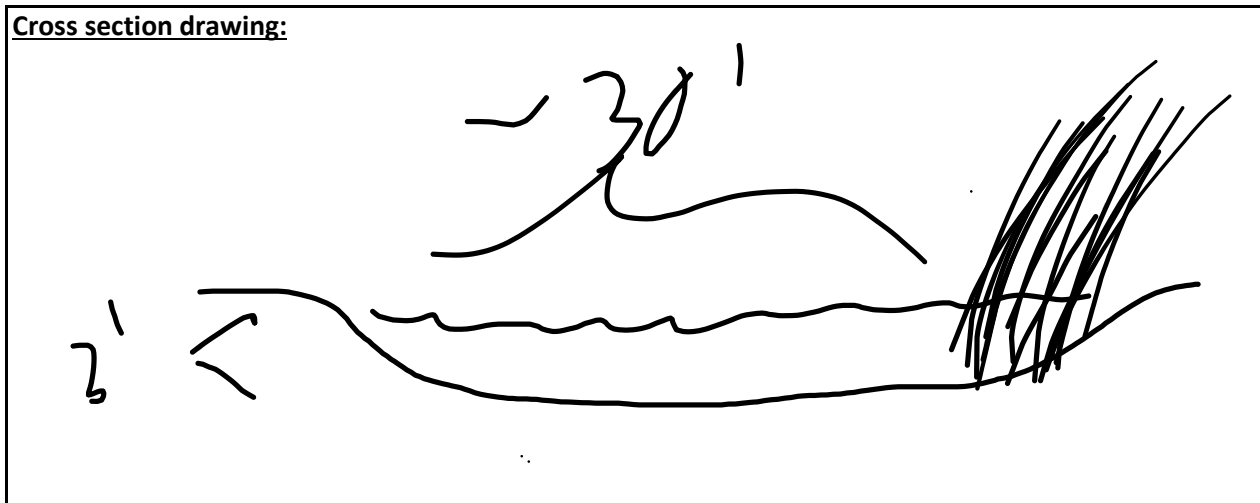
Feature ID: D21-3x

Cross section ID:

Date: 4/1/2020

Time:

Cross section drawing:



OHW

GPS point: \_\_\_\_\_

**Indicators:**

☒ Change in average sediment texture

☒ Change in vegetation species

☒ Change in vegetation cover

☒ Break in bank slope

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

**Comments:**

Water present, shrub willows on banks around pond.

Floodplain unit:

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA

☐ Early (herbaceous & seedlings)

☐ Mid (herbaceous, shrubs, saplings)

☐ Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐ Mudcracks

☐ Ripples

☐ Drift and/or debris

☐ Presence of bed and bank

☐ Benches

☐ Soil development

☐ Surface relief

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# **Arid West Ephemeral and Intermittent Streams OHW M Datasheet**

<b>Sampling Point:</b> <u>42-3x</u>		<b>Feature ID:</b> <u>D22-3x</u>		<b>Date:</b> <u>4/1/2020</u>	
<b>Project:</b> <u>Zayo Fibo optic</u>					
<b>Location:</b> <u>Modoc County</u>			<b>Photo begin/end file#:</b> <u>See Field Photos</u>		
<b>Investigator(s):</b> <u>B. Cohen, M. Gould</u>					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> <u>Lambert</u> <b>Datum:</b> <u>NAD83</u> <b>Coordinates:</b> <u>41.4492, -120.5481</u>			
<b>Potential anthropogenic influences on the channel system:</b> Wildlife refuge berms and water control					
<b>Brief site description:</b> Large pond in wildlife refuge					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </div> </div>					
<div style="text-align: center;"> <p><b>Hydrogeomorphic Floodplain Units</b></p> </div> <p><b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b></p> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via: <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <input type="checkbox"/> Mapping on aerial photograph    <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Digitized on computer    <input type="checkbox"/> Other: </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

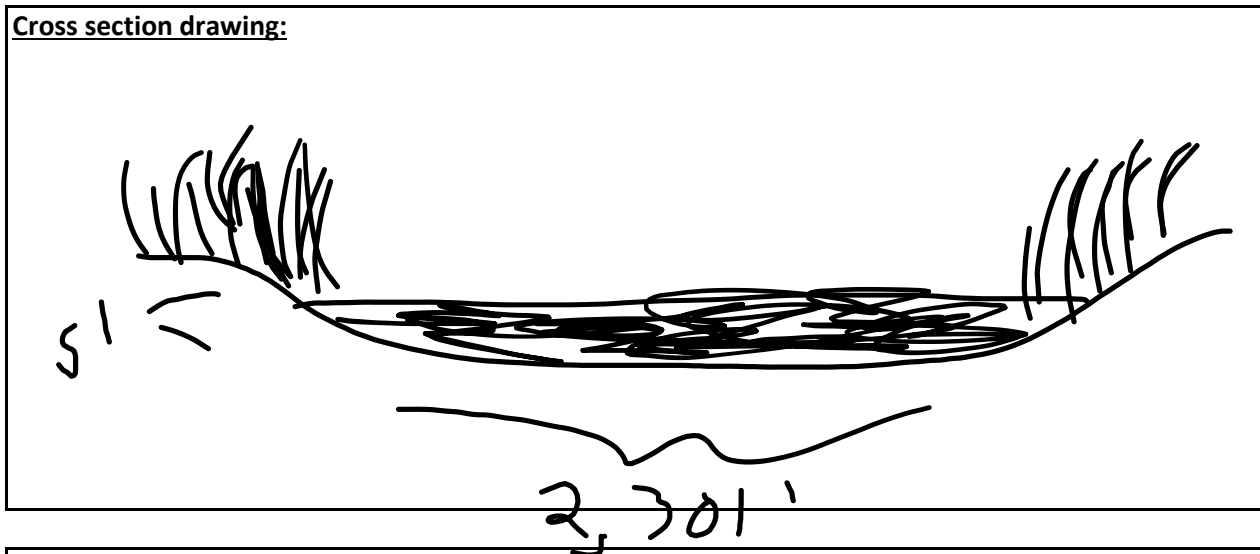


Feature ID: D22-3x

Cross section ID:

Date: 4/1/2020

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

Pond with water present at time of survey and patchy vegetation on banks, hydrology likely controlled as it is within National Wildlife Refuge with controlled water levels.

Floodplain unit:☐ Low-Flow Channel☒ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:Average sediment texture: loamTotal veg cover: 75 % Tree: 0 % Shrub: 0 % Herb: 75 %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☒ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☐ Drift and/or debris☒ Presence of bed and bank☐ Benches☒ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# **Arid West Ephemeral and Intermittent Streams OHW M Datasheet**

<b>Sampling Point:</b> <u>47-3x</u>		<b>Feature ID:</b> <u>D23-3x</u>		<b>Date:</b> <u>4/2/2020</u>	
<b>Project:</b> <u>Zayo Fiberoptic</u>					
<b>Location:</b> <u>Modoc County</u>			<b>Photo begin/end file#:</b> <u>See Field Photos</u>		
<b>Investigator(s):</b> <u>B. Cohen, M. Gould</u>					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> <u>Lambert</u> <b>Datum:</b> <u>NAD83</u> <b>Coordinates:</b> <u>41.4439, -120.5473</u>			
<b>Potential anthropogenic influences on the channel system:</b> Wildlife refuge water control, berms					
<b>Brief site description:</b> Large pond bermed on both sides within wildlife refuge. Mapped aerially, OHW M data point taken via GPS.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input checked="" type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input type="checkbox"/> GPS  <input type="checkbox"/> Other: _____             </div> </div> </li> </ol>					



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D23-3x

Cross section ID:

Date: 4/2/2020

Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

**Comments:**

Pond with stringer wetlands on edges and water present at time of survey, likely controlled water levels by Wildlife Refuge.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: 70 % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: 70 %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 51-3x		<b>Feature ID:</b> D24-3x		<b>Date:</b> 4/2/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> B. Cohen, M. Gould					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.4554, -120.5487			
<b>Potential anthropogenic influences on the channel system:</b> Wildlife refuge berms and water control					
<b>Brief site description:</b> Braided channels and ponds interconnected with shared hydrology. Mapped aerially, OHW M data point taken through GPS.					
<b>Checklist of resources (if available)</b> <input checked="" type="checkbox"/> Aerial photography <input type="checkbox"/> Stream gage data <b>Dates:</b> _____ <b>Gage number:</b> _____ <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Period of record: <input type="checkbox"/> Geologic maps <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Vegetation maps <input type="checkbox"/> Results of flood frequency analysis <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and <input type="checkbox"/> Existing delineation(s) for site the most recent event exceeding a 5-year event <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p> <p style="text-align: center;"><b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b></p> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via: <div style="display: flex; justify-content: space-around;"> <input checked="" type="checkbox"/> Mapping on aerial photograph <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Digitized on computer <input type="checkbox"/> Other: </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D24-3x

Cross section ID:

Date: 4/2/2020

Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

water present at time of survey. Ponds and channels surrounded by wetlands and berms to control water and hydrology.

**Floodplain unit:**☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Feature ID: W05-3x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 3/31/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 43N, 13E, 33  
 Local relief (hillside, terrace, etc.): Floodplain Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 41.5226 Long: -120.4762 Datum: NAD 83  
 Soil Map Unit Name: Buntington Clay Loam, 0 to 2 percent slopes NWI classification: pond,FEW,riparian wet  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: Fresh Emergent Wetland with all three indicators present.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: _____ )				
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
<b>Sapling/Shrub Stratum</b> (Plot size: _____ )				
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		0	= Total Cover	
<b>Herb Stratum</b> (Plot size: _____ )				
1	<u>Typlat</u> <u>Typha latifolia</u>	40	YES	OBL
2	<u>Phaaru</u> <u>Phalaris arundinacea</u>	50	YES	FACW
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		90	= Total Cover	
<b>Woody Vine Stratum</b> (Plot size: _____ )				
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 5 % Cover of Biotic Crust:           

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>40</u>	x 1 = <u>40</u>
FACW species <u>50</u>	x 2 = <u>100</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>90</u> (A)	<u>140</u> (B)
Prevalence Index = B/A = <u>1.5556</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Dominated by FACW and OBL veg, sample area has dominance of hydrophytic vegetation.



SOIL							Sampling Point: 26-3x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 3/2	65	7.5 YR 4/6	35	C	Pl/M	Silty clay loam	Prominent redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Hydric soil evidenced by indicator F6 with a layer that is at least 4 inches thick starting within 8 inches of the mineral soil surface and has a matrix value of 3 or less and a chroma of 2 less with at least 5 percent prominent redox concentrations occurring as soft masses and pore linings.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input checked="" type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): 5				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology evidenced by primary indicator saturation within 12 inches of the soil surface and secondary indicators Saturation visible on aerial imagery and passes the FAC-Neutral test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc county Sampling Point: 27-3x Feature ID: U5-3x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 3/31/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 43N, 13E, 33  
 Local relief (hillside, terrace, etc.): Road slope Local Relief (concave, convex, none): Convex Slope (%): 25  
 Subregion (LRR): D Lat: 41.5226 Long: -120.4761 Datum: NAD 83  
 Soil Map Unit Name: Buntington Clay Loam, 0 to 2 percent slopes NWI classification: FEW/riparian wetland  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W5-3x. Area dominated by hydrophytic vegetation but does not have hydric soil or hydrology indicators.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: _____ )				
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
<b>Sapling/Shrub Stratum</b> (Plot size: _____ )				
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		0	= Total Cover	
<b>Herb Stratum</b> (Plot size: _____ )				
1	<u>Conmac</u>	30	YES	FACW
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		30	= Total Cover	
<b>Woody Vine Stratum</b> (Plot size: _____ )				
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 70 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>30</u>	x 2 =	<u>60</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>30</u> (A)		<u>60</u> (B)
Prevalence Index = B/A = <u>2</u>		

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Dominance of FACW vegetation present in upland point.

SOIL							Sampling Point: 27-3x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	7.5 YR 3/4	100					Loam	Road fill gravel throughout
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: road base						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Depth (inches): 12								
<b>Remarks:</b> Soil is on road slope and likely introduced non native soil for road construction. No hydric soil indicators observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches):		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches):						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches):						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Only FAC-Neutral Test secondary indicator observed, does not meet criteria for wetland hydrology.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 30-3x Feature ID: W06-3x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 3/31/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 43N, 13E, 33  
 Local relief (hillside, terrace, etc.): Floodplain Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 41.5188 Long: -120.4796 Datum: NAD 83  
 Soil Map Unit Name: Buntington Clay Loam, 0 to 2 percent slopes NWI classification: Riparian Wetland  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

**Remarks:** Riparian Wetland with all three indicators present, mapped via aerial imagery, data points obtained in field to verify boundaries via GPS. Soils are problematic and assumed hydric, see soil remarks.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1	Salexi Salix exigua	80	YES	FACW
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		80	= Total Cover	
Herb Stratum	(Plot size: _____)			
1	Phaarur Phalaris arundinacea	40	YES	FACW
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		40	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum:      % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)  
  
 Total Number of Dominant Species Across All Strata: 2 (B)  
  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>120</u>	x 2 = <u>240</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>120</u> (A)	<u>240</u> (B)
Prevalence Index = B/A = <u>2</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes X No     

**Remarks:** Most willows appear dead with some new growth but lots of old dead larger individuals. Dominance of hydrophytic vegetation present.

<b>SOIL</b>		Sampling Point: 30-3x						
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	10 YR 2/2	100					Clay loam	
3-16	7.5 YR 3/3	100					Loamy sand	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.			<sup>2</sup> Location: PL=Pore Lining, M=Matrix.					
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)		<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input checked="" type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Stripped Matrix (S6)						
<input type="checkbox"/> Black Histic (A3)		<input type="checkbox"/> Loamy Mucky Mineral (F1)						
<input type="checkbox"/> Hydrogen Sulfide (A4)		<input type="checkbox"/> Loamy Gleyed Matrix (F2)						
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )		<input type="checkbox"/> Depleted Matrix (F3)						
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )		<input type="checkbox"/> Redox Dark Surface (F6)						
<input type="checkbox"/> Depleted Below Dark Surface (A11)		<input type="checkbox"/> Depleted Dark Surface (F7)						
<input type="checkbox"/> Thick Dark Surface (A12)		<input type="checkbox"/> Redox Depressions (F8)						
<input type="checkbox"/> Sandy Mucky Mineral (S1)		<input type="checkbox"/> Vernal Pools (F9)						
<input type="checkbox"/> Sandy Gleyed Matrix (S4)				<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
<b>Restrictive Layer (if present):</b>					<b>Hydric Soil Present?</b>			
Type: _____					Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Depth (inches): _____								
<b>Remarks:</b> Soils are naturally problematic and assumed hydric due to a dominance of hydrophytic vegetation, primary hydrology and feature is within a concave position in a floodplain. Chapter 5 problematic soils applies. In addition region lacks redox features in wetland areas.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>				
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )				
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )				
<input checked="" type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )				
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)				
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): 6						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology evidenced by saturation within 12 inches of the soil surface and sample area passes FAC-Neutral Test.								

## WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 31-3x Feature ID: U6-3x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 3/31/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 43N, 13E, 33  
 Local relief (hillside, terrace, etc.): Road slope Local Relief (concave, convex, none): Convex Slope (%): 27  
 Subregion (LRR): D Lat: 41.5187 Long: -120.4796 Datum: NAD 83  
 Soil Map Unit Name: Buntington Clay Loam, 0 to 2 percent slopes NWI classification: Riparian Wetland  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x  
 Hydric Soil Present? Yes      No x  
 Wetland Hydrology Present? Yes      No x  
 Is the Sampled Area within a Wetland? Yes      No X

Remarks: Upland pair point to W6-3x. No wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>		= Total Cover

Herb Stratum (Plot size: <u>    </u> )				
1	<u>Vervg</u>	<u>Verbasum virgatum</u>	<u>15</u>	<u>YES</u> <u>UPL</u>
2	<u>Brotec</u>	<u>Bromus tectorum</u>	<u>20</u>	<u>YES</u> <u>UPL</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
			<u>35</u>	= Total Cover

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
			<u>0</u>	= Total Cover

%Bare Ground in Herb Stratum: 70 % Cover of Biotic Crust:     

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>35</u>	x 5 = <u>175</u>
Column Totals: <u>35</u> (A)	<u>175</u> (B)
Prevalence Index = B/A = <u>5</u>	

## Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes      No X

Remarks:

SOIL							Sampling Point: 31-3x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	2.5 YR 4/6	100					Loam	Mix of other colors
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b> Type: <u>road base</u> Depth (inches): <u>12</u>						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Road slope introduced soil. No hydric soil indicators observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)						Secondary Indicators (2 or more required)		
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 32-3x Feature ID: W07-3x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 3/31/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 43N, 13E, 33  
 Local relief (hillside, terrace, etc.): Floodplain Local Relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): D Lat: 41.5165 Long: -120.482 Datum: NAD 83  
 Soil Map Unit Name: Buntington Clay Loam, 0 to 2 percent slopes NWI classification: FO/Shrub wetland/ FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: Riparian/Fresh Emergent Wetland complex confirmed by having all three wetland indicators present.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: _____ )				
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
<b>Sapling/Shrub Stratum</b> (Plot size: _____ )				
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		0	= Total Cover	
<b>Herb Stratum</b> (Plot size: _____ )				
1	<u>Typlat</u>	75	YES	OBL
2	<u>Phaarur</u>	60	YES	FACW
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		135	= Total Cover	
<b>Woody Vine Stratum</b> (Plot size: _____ )				
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 5 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>75</u>	x 1 = <u>75</u>
FACW species <u>60</u>	x 2 = <u>120</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>135</u> (A)	<u>195</u> (B)
Prevalence Index = B/A = <u>1.4444</u>	

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Sample area dominated by FACW and OBL vegetation, indicates a dominance of hydrophytic vegetation.



SOIL							Sampling Point: 32-3x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 3/2	92	5 YR 3/4	8	C	M	Sandy clay loam	Prominent Redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Hydric soil evidenced by indicator F6 with a layer that is at least 4 inches thick starting within 8 inches of the mineral soil surface and has a matrix value of 3 or less and a chroma of 2 or less with at least 5 percent prominent redox concentrations occurring as soft masses.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input checked="" type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology evidenced by three secondary indicators: Riverine drift deposits, Saturation visible on Aerial Imagery, and passes FAC-Neutral Test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 33-3x Feature ID: U07-3x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 3/31/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 43N, 13E, 33  
 Local relief (hillside, terrace, etc.): Road slope Local Relief (concave, convex, none): Convex Slope (%): 30  
 Subregion (LRR): D Lat: 41.5165 Long: -120.4819 Datum: NAD 83  
 Soil Map Unit Name: Buntington Clay Loam, 0 to 2 percent slopes NWI classification: FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point W7-3x. No wetland indicators observed. Soil pit not dug due to large riprap in upland point.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u> = Total Cover		

Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1 <u>erinau</u>	<u>Ericameria nauseosa</u>	<u>35</u>	<u>YES</u>	<u>UPL</u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
5 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>35</u> = Total Cover		

Herb Stratum (Plot size: <u>    </u> )				
1 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
5 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
6 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
7 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
8 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
9 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
10 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
11 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u> = Total Cover		

Woody Vine Stratum (Plot size: <u>    </u> )				
1 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u> = Total Cover		

%Bare Ground in Herb Stratum: 100 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>35</u>	x 5 = <u>175</u>
Column Totals: <u>35</u> (A)	<u>175</u> (B)
Prevalence Index = B/A = <u>5</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: No hydrophytic vegetation observed at upland point.

SOIL							Sampling Point:		33-3x	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Matrix		Redox Features				Texture	Remarks		
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>				
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.				
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)										
Histosol (A1) _____			Sandy Redox (S5) _____			Indicators for Problematic Hydric Soils <sup>3</sup> :				
Histic Epipedon (A2) _____			Stripped Matrix (S6) _____			_____ 1 cm Muck (A9) ( <b>LRR C</b> )				
Black Histic (A3) _____			Loamy Mucky Mineral (F1) _____			_____ 2 cm Muck (A10) ( <b>LRR B</b> )				
Hydrogen Sulfide (A4) _____			Loamy Gleyed Matrix (F2) _____			_____ Reduced Vertic (F18)				
Stratified Layers (A5) ( <b>LRR C</b> ) _____			Depleted Matrix (F3) _____			_____ Red Parent Material (TF2)				
1 cm Muck (A9) ( <b>LRR D</b> ) _____			Redox Dark Surface (F6) _____			_____ Other (Explain in Remarks)				
Depleted Below Dark Surface (A11) _____			Depleted Dark Surface (F7) _____							
Thick Dark Surface (A12) _____			Redox Depressions (F8) _____							
Sandy Mucky Mineral (S1) _____			Vernal Pools (F9) _____							
Sandy Gleyed Matrix (S4) _____										
						<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
Restrictive Layer (if present):						Hydric Soil Present?				
Type: _____ riprap										
Depth (inches): _____ 0						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Remarks: Soil pit not dug due to large rip rap along road slope in sample point.										
HYDROLOGY										
Wetland Hydrology Indicators:						Secondary Indicators (2 or more required)				
Primary Indicators (minimum of one required; check all that apply)										
____ Surface Water (A1)			____ Salt Crust (B11)			____ Water Marks (B1) ( <b>Riverine</b> )				
____ High Water Table (A2)			____ Biotic Crust (B12)			____ Sediment Deposits (B2) ( <b>Riverine</b> )				
____ Saturation (A3)			____ Aquatic Invertebrates (B13)			____ Drift Deposits (B3) ( <b>Riverine</b> )				
____ Water Marks (B1) ( <b>Nonriverine</b> )			____ Hydrogen Sulfide Odor (C1)			____ Drainage Patterns (B10)				
____ Sediment Deposits (B2) ( <b>Nonriverine</b> )			____ Oxidized Rhizospheres along Living Roots (C3)			____ Dry-Season Water Table (C2)				
____ Drift Deposits (B3) ( <b>Nonriverine</b> )			____ Presence of Reduced Iron (C4)			____ Crayfish Burrows (C8)				
____ Surface Soil Cracks (B6)			____ Recent Iron Reduction in Tilled Soils (C6)			____ Saturation Visible on Aerial Imagery (C9)				
____ Inundation Visible on Aerial Imagery (B7)			____ Thin Muck Surface (C7)			____ Shallow Aquitard (D3)				
____ Water-Stained Leaves (B9)			Other (Explain in Remarks)			____ FAC-Neutral Test (D5)				
Field Observations:						Wetland Hydrology Present?				
Surface Water Present? Yes ____ No <input checked="" type="checkbox"/>		Depth (inches): _____								
Water Table Present? Yes ____ No <input checked="" type="checkbox"/>		Depth (inches): _____								
Saturation Present? Yes ____ No <input checked="" type="checkbox"/> (includes capillary fringe)		Depth (inches): _____		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:										
Remarks: No hydrology indicators observed.										

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 34-3x Feature ID: W08-3x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 3/31/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 48N, 13E, 33  
 Local relief (hillside, terrace, etc.): Floodplain Local Relief (concave, convex, none): Concave Slope (%): 3  
 Subregion (LRR): D Lat: 41.5162 Long: -120.4824 Datum: NAD 83  
 Soil Map Unit Name: Buntingtonville Clay Loam, 0 to 2 percent slopes NWI classification: FO/Shrub wet/riparian  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks:

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		0	= Total Cover	
Herb Stratum	(Plot size: _____)			
1	Typlat	33	YES	OBL
2	Phaar	80	YES	FACW
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		113	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

% Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant  
Species Across All Strata: 2 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>33</u>	x 1 = <u>33</u>
FACW species <u>80</u>	x 2 = <u>160</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>113</u> (A)	<u>193</u> (B)
Prevalence Index = B/A = <u>1.708</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation  
Present?

Yes X No     

Remarks: Sample area dominated by FACW and OBL vegetation, passes dominance test for hydrophytic vegetation.

SOIL							Sampling Point: 34-3x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10 YR 3/2	100					Clay loam	
8-16	10 YR 3/2	93	2.5 YR 3/6	7	C	M	Clay loam	Prominent redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Hydric soil evidenced by indicator F6 with a layer that is at least 4 inches thick starting within 8 inches of the mineral soil surface that has a matrix value of 3 or less and a chroma of 2 or less with at least 5 percent prominent redox concentrations occurring as soft masses.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input checked="" type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): 10				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology evidenced by saturation within 12 inches of the soil surface and has three secondary indicators present including drainage patterns, saturation visible on aerial imagery and passes FAC-Neutral Test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 34-3x Feature ID: U08-3x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 3/31/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 48N, 13E, 33  
 Local relief (hillside, terrace, etc.): RipRap Slope Local Relief (concave, convex, none): Convex Slope (%): 3  
 Subregion (LRR): D Lat: 41.5162 Long: -120.4824 Datum: NAD 83  
 Soil Map Unit Name: Buntingtonville Clay Loam, 0 to 2 percent slopes NWI classification: FO/Shrub wet/riparian  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u>    </u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W08-3x, no wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1	<u>erinau</u>	<u>ericameria nauseosa</u>	<u>30</u>	<u>YES</u> <u>UPL</u>
2				
3				
4				
5				
		<u>30</u>	= Total Cover	

Herb Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>0</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 100 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>30</u>	x 5 = <u>150</u>
Column Totals: <u>30</u> (A)	<u>150</u> (B)
Prevalence Index = B/A = <u>5</u>	

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
  - No 2 - Dominance Test is >50%
  - No 3 - Prevalence Index is ≤3.0<sup>1</sup>
  - 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
  - 5 - Wetland Non-Vascular Plants<sup>1</sup>
  - 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Sample area has no herbaceous vegetation in riprap but has upland shrubs, no hydrophytic vegetation observed in upland pair plot.

SOIL		Sampling Point: 34-3x				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.				<sup>4</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						
<input type="checkbox"/> Histosol (A1)		<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Stripped Matrix (S6)				
<input type="checkbox"/> Black Histic (A3)		<input type="checkbox"/> Loamy Mucky Mineral (F1)				
<input type="checkbox"/> Hydrogen Sulfide (A4)		<input type="checkbox"/> Loamy Gleyed Matrix (F2)				
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )		<input type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )		<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)		<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Thick Dark Surface (A12)		<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)		<input type="checkbox"/> Vernal Pools (F9)				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)						
<b>Restrictive Layer (if present):</b>				<b>Hydric Soil Present?</b>		
Type: <u>                    riprap                    </u> Depth (inches): <u>                    0                    </u>				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Soil pit not dug in riprap.						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)						
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>				<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>                    </u>		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>                    </u>				
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>                    </u>				
(includes capillary fringe)						
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> No hydrology indicators observed.						

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 36-3x Feature ID: W09-3x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/1/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 48N, 13E, 33  
 Local relief (hillside, terrace, etc.): Floodplain Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 41.5163 Long: -120.4823 Datum: NAD83  
 Soil Map Unit Name: Buntingtonville Clay Loam, 0 to 2 percent slopes NWI classification: FO/Shrub wet/riparian  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: Sample area confirmed as wetland, all three wetland indicators present.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1 <u>Salexi</u>	<u>Salix exigua</u>	<u>90</u>	<u>YES</u>	<u>FACW</u>
2				
3				
4		<u>12</u>		
5				
		<u>102</u>	= Total Cover	

Herb Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>0</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 100 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)  
  
 Total Number of Dominant Species Across All Strata: 1 (B)  
  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>90</u>	x 2 = <u>180</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>90</u> (A)	<u>180</u> (B)
Prevalence Index = B/A = <u>2</u>	

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Sample area dominated by hydrophytic vegetation.



SOIL		Sampling Point: 36-3x						
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10 YR 2/1	100					Clay loam	
6-16	10 YR 2/1	96	7.5 YR 4/6	4	C	M	Clay loam	Prominent redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.					<sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			Indicators for Problematic Hydric Soils <sup>3</sup> :		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) (LRR C)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) (LRR B)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) (LRR C)			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)			<input checked="" type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
Restrictive Layer (if present):					Hydric Soil Present?			
Type: _____					Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Depth (inches): _____								
Remarks: Hydric soil evidenced by indicator F6 with a layer that is at least 4 inches thick starting within 8 inches of the mineral soil surface and has a matrix value of 3 or less and a chroma of 1 or less with at least 2 percent prominent redox concentrations occurring as soft masses.								
HYDROLOGY								
Wetland Hydrology Indicators:					Secondary Indicators (2 or more required)			
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) (Riverine)			
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) (Riverine)			
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) (Riverine)			
<input type="checkbox"/> Water Marks (B1) (Nonriverine)			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)			<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)			
Field Observations:					Wetland Hydrology Present?			
Surface Water Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Water Table Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____					
Saturation Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____					
(includes capillary fringe)								
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks: Hydrology likely from river flood or storm events as it is in floodplain close to river. Hydrology evidenced by water-stained leaves and passes FAC-Neutral Test.								

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

**Remarks:** Closest suitable point is in riprap on road slope. Wetlands on each other side, Upland pair point to W9-3x, no wetland indicators observed.

**VEGETATION** – Use scientific names of plants. List all species in the plot. **MUST LIST COVER IN DESECENDING ORDER**

**Dominance Test worksheet:**

Number of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant  
Species Across All Strata: 0 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC:  $\#DIV/0!$  (A/B)

Prevalence Index worksheet:			
<u>Total % Cover of:</u>		<u>Multiply by:</u>	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	0	(A)	0 (B)
Prevalence Index = B/A =			

**Hydrophytic Vegetation Indicators:**

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ No 3 - Prevalence Index is  $\leq 3.0$ <sup>1</sup>
- ☐ 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants<sup>1</sup>
- ☐ 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation  
Present? Yes ☐ No ☒

Remarks: No veg in riprap

SOIL		Sampling Point: 37-3x				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.				<sup>4</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						
<input type="checkbox"/> Histosol (A1)		<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Stripped Matrix (S6)				
<input type="checkbox"/> Black Histic (A3)		<input type="checkbox"/> Loamy Mucky Mineral (F1)				
<input type="checkbox"/> Hydrogen Sulfide (A4)		<input type="checkbox"/> Loamy Gleyed Matrix (F2)				
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )		<input type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )		<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)		<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Thick Dark Surface (A12)		<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)		<input type="checkbox"/> Vernal Pools (F9)				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)						
<b>Restrictive Layer (if present):</b>				<b>Hydric Soil Present?</b>		
Type: <u>rip rap</u> Depth (inches): <u>0</u>				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Soil pit not dug in riprap						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)						
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>				<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> No hydrology indicators observed.						

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 38-3x Feature ID: W11-3x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/1/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 42N, 12E, 13  
 Local relief (hillside, terrace, etc.): Swale Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 41.4777 Long: -120.5431 Datum: NAD83  
 Soil Map Unit Name: Pit Silty Clay Loam, 0 to 2 percent slopes NWI classification: Riparian Wetland  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: Riparian/ fresh emergent wetland complex in depressional swale. Mix of Juncus and willows. Soils are problematic and assumed hydric. See soil remarks for more details. All three wetland parameters observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1	<u>Sallexi</u> <u>Salix exigua</u>	60	YES	FACW
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	12	_____	_____
5	_____	_____	_____	_____
		72	= Total Cover	
Herb Stratum	(Plot size: _____)			
1	<u>Junbal</u> <u>Juncus balticus</u>	100	YES	FACW
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		100	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>160</u>	x 2 = <u>320</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>160</u> (A)	<u>320</u> (B)
Prevalence Index = B/A = <u>2</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>

     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

     5 - Wetland Non-Vascular Plants<sup>1</sup>

     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Dominance of FACW vegetation observed within sample area.

SOIL		Sampling Point:		38-3x				
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features			Texture	Remarks	
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			Loc <sup>2</sup>
0-16	10 YR 3/1	100					Clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.			<sup>2</sup> Location: PL=Pore Lining, M=Matrix.					
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)						Indicators for Problematic Hydric Soils <sup>3</sup> :		
<input checked="" type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)						
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)						
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)						
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)						
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input checked="" type="checkbox"/> Other (Explain in Remarks)						
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)							
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)							
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
Restrictive Layer (if present):			Hydric Soil Present?					
Type: _____			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Depth (inches): _____								
Remarks: Soil is problematic with water table to surface in appropriate landscape position and meets Chapter 5 problematic hydric soil criteria. Soil is 3/1 and one value below threshold for depletion's but due to strong hydrology and wetness of soils it is likely depleted and may not show soft masses.								
HYDROLOGY								
Wetland Hydrology Indicators:			Secondary Indicators (2 or more required)					
Primary Indicators (minimum of one required; check all that apply)								
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)						
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)						
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)						
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)						
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)						
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)						
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)						
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)						
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)						
Field Observations:			Wetland Hydrology Present?					
Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	0.5		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	0					
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	0					
(includes capillary fringe)								
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks: Primary hydrology observed through surface water present along with water table and saturation within 12 inches of the soil surface. In addition saturation was visible on aerial imagery and passes FAC-Neutral Test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 39-3x Feature ID: U11-3x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/1/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 42N, 12E, 13  
 Local relief (hillside, terrace, etc.): Slope Local Relief (concave, convex, none): Convex Slope (%): 10  
 Subregion (LRR): D Lat: 41.4777 Long: -120.5431 Datum: NAD83  
 Soil Map Unit Name: Pit Silty Clay Loam, 0 to 2 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W11-3x, no wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	12	_____	_____
5	_____	_____	_____	_____
		12	= Total Cover	
Herb Stratum	(Plot size: _____)			
1	<u>Lolmul</u>	65	YES	UPL
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		65	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 45 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant  
Species Across All Strata: 1 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>65</u>	x 5 = <u>325</u>
Column Totals: <u>65</u> (A)	<u>325</u> (B)
Prevalence Index = B/A = <u>5</u>	

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation  
Present?

Yes      No X

Remarks: No hydrophytic vegetation observed within upland pair point

<b>SOIL</b>						Sampling Point: 39-3x		
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 3/2	100					Clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)		<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>				
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )				
<input type="checkbox"/> Black Histic (A3)		<input type="checkbox"/> Loamy Mucky Mineral (F1)		<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )				
<input type="checkbox"/> Hydrogen Sulfide (A4)		<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Reduced Vertic (F18)				
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )		<input type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Red Parent Material (TF2)				
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )		<input type="checkbox"/> Redox Dark Surface (F6)		<input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)		<input type="checkbox"/> Depleted Dark Surface (F7)						
<input type="checkbox"/> Thick Dark Surface (A12)		<input type="checkbox"/> Redox Depressions (F8)						
<input type="checkbox"/> Sandy Mucky Mineral (S1)		<input type="checkbox"/> Vernal Pools (F9)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____					<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
<b>Remarks:</b> No hydric soil indicators observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>				
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )				
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )				
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )				
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)				
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Feature ID: W12-3x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/1/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 42N, 12E, 13  
 Local relief (hillside, terrace, etc.): Pond bank Local Relief (concave, convex, none): Concave Slope (%): 3  
 Subregion (LRR): D Lat: 41.4765 Long: -120.5436 Datum: NAD83  
 Soil Map Unit Name: Pit Silty Clay Loam, 0 to 2 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No       
 Is the Sampled Area within a Wetland? Yes x No     

Remarks: All three wetland indicators observed, sample point has high surface water therefore soil pit not dug and point passes rapid test therefore soils are assumed hydric.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1 <u>Salix</u>	<u>Salix exigua</u>	<u>85</u>	<u>YES</u>	<u>FACW</u>
2				
3				
4				
5				
		<u>85</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 100 % Cover of Biotic Crust:     

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>85</u>	x 2 =	<u>170</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>85</u> (A)		<u>170</u> (B)
Prevalence Index = B/A = <u>2</u>		

## Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Surface water herb stratum. No herbaceous veg, surface water. Sample point has dominance of hydrophytic vegetation in shrub layer.



SOIL							Sampling Point:	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			Indicators for Problematic Hydric Soils <sup>3</sup> :		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
Restrictive Layer (if present):					Hydric Soil Present?			
Type: _____					Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Depth (inches): _____								
Remarks: Inaccessible to dig pit in deep surface water. Due to dominant FACW plants only and deep surface water soil is assumed hydric - passes ponded/flooded conditions in Chapter 5 for hydric soils.								
HYDROLOGY								
Wetland Hydrology Indicators:					Secondary Indicators (2 or more required)			
Primary Indicators (minimum of one required; check all that apply)								
<input checked="" type="checkbox"/> X Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input checked="" type="checkbox"/> X FAC-Neutral Test (D5)		
Field Observations:					Wetland Hydrology Present?			
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): 20						
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): 0						
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (includes capillary fringe)		Depth (inches): 0		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks: Hydrology indicated by primary indicators surface water along with saturation and water table within 12 inches of the soil surface; inundation is visible on aerial imagery and sample point passes FAC-Neutral Test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 42-3x Feature ID: U12-3x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/1/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 42N, 12E, 13  
 Local relief (hillside, terrace, etc.): Ag road Local Relief (concave, convex, none): Convex Slope (%): 10  
 Subregion (LRR): D Lat: 41.4768 Long: -120.5436 Datum: NAD83  
 Soil Map Unit Name: Pit Silty Clay Loam, 0 to 2 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W12-3x, no wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover
<b>Sapling/Shrub Stratum</b> (Plot size: <u>    </u> )				
1				
2				
3				
4		<u>12</u>		
5				
		<u>12</u>		= Total Cover
<b>Herb Stratum</b> (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>0</u>		= Total Cover
<b>Woody Vine Stratum</b> (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 100 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: #DIV/0! (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>0</u> (A)	<u>0</u> (B)

Prevalence Index = B/A =     

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
  - 2 - Dominance Test is >50%
  - No 3 - Prevalence Index is ≤3.0<sup>1</sup>
  - 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
  - 5 - Wetland Non-Vascular Plants<sup>1</sup>
  - 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: No veg in upland ag road

<b>SOIL</b>						Sampling Point: 42-3x		
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 3/3	100					loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> No hydric soil indicators observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Feature ID: W14-3x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/1/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 44N, 12E, 26  
 Local relief (hillside, terrace, etc.): Valley grassland Local Relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): D Lat: 41.4491 Long: -120.5484 Datum: NAD83  
 Soil Map Unit Name: Casuse Sandy Loam, 2 to 9 percent slopes NWI classification: FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No       
 Is the Sampled Area within a Wetland? Yes x No     

Remarks: All three wetland indicators observed, soils are problematic and assumed hydric - see soil remarks.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	12	_____	_____
5 _____	_____	_____	_____	_____
		12	= Total Cover	
Herb Stratum	(Plot size: 2m _____)			
1 <u>unkgr</u>	<u>unknown grass</u>	70	YES	FAC
2 <u>Juneff</u>	<u>Juncus effusus</u>	20	YES	FACW
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
5 _____	_____	_____	_____	_____
6 _____	_____	_____	_____	_____
7 _____	_____	_____	_____	_____
8 _____	_____	_____	_____	_____
9 _____	_____	_____	_____	_____
10 _____	_____	_____	_____	_____
11 _____	_____	_____	_____	_____
		90	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 10 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>20</u>	x 2 = <u>40</u>
FAC species <u>70</u>	x 3 = <u>210</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>90</u> (A)	<u>250</u> (B)
Prevalence Index = B/A = <u>2.7778</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Unknown grass in sample area labelled FAC and is likely FAC or FACW species, passes dominance test for hydrophytic vegetation.

<b>SOIL</b>							Sampling Point: 43-3x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	10 YR 5/4	60	10 YR 4/1	40	D	M	Loam	
3-12	10 YR 4/4	100					Loamy sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input checked="" type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)		
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)		
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if present):</b> Type: _____ Clay Depth (inches): 12	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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**Remarks:** Soil is sandy below with restrictive layer trapping water. Upper layer has high level of depletions. Assumed hydric and problematic due to restrict layer, sandy content, and mottle with depletions and sample area is in a concave position with high water table (Chapter 5 soils).

<b>HYDROLOGY</b>		
<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (2 or more required)</b>
Primary Indicators (minimum of one required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 0 Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 0 (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	--

**Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:** Hydrology evidenced by indicators water table and saturation within 12 inches of the soil surface and passes FAC-Neutral Test.

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Feature ID: U14-3x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/1/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 44N, 12E, 26  
 Local relief (hillside, terrace, etc.): Valley grassland Local Relief (concave, convex, none): None Slope (%): 1  
 Subregion (LRR): D Lat: 41.4491 Long: -120.5484 Datum: NAD83  
 Soil Map Unit Name: Casuse Sandy Loam, 2 to 9 percent slopes NWI classification: FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W14-3x, no wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	12	_____	_____
5	_____	_____	_____	_____
		12	= Total Cover	
Herb Stratum	(Plot size: _____)			
1	<u>Elycap</u> <u>Elymus caput-medusae</u>	35	YES	UPL
2	<u>Elyhis</u> <u>Elymus hispidus</u>	25	YES	UPL
3	<u>unkgrr</u> <u>unknown grass</u>	15	NO	FAC
4	<u>Lolmul</u> <u>Lolium multiflorum</u>	10	NO	UPL
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		85	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 25 % Cover of Biotic Crust:             

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>15</u>	x 3 = <u>45</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>70</u>	x 5 = <u>350</u>
Column Totals: <u>85</u> (A)	<u>395</u> (B)
Prevalence Index = B/A = <u>4.6471</u>	

## Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: No hydrophytic vegetation observed at sample area.

SOIL		Sampling Point: 44-3x				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
0-16	10 YR 5/6	100			Loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.			<sup>4</sup> Location: PL=Pore Lining, M=Matrix.			
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
				<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<b>Restrictive Layer (if present):</b>			<b>Hydric Soil Present?</b>			
Type: _____ Depth (inches): _____			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
<b>Remarks:</b> No hydric soil indicators observed in sample area.						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>			<b>Secondary Indicators (2 or more required)</b>			
Primary Indicators (minimum of one required; check all that apply)						
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>			<b>Wetland Hydrology Present?</b>			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> No hydrology indicators observed in sample area.						

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Feature ID: W15-3x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/2/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 42N, 12E, 26  
 Local relief (hillside, terrace, etc.): Valley grassland Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 41.4528 Long: -120.5492 Datum: NAD83  
 Soil Map Unit Name: Pasquetti Silty Clay Loam, drained NWI classification: FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

**Remarks:** All three wetland parameters observed, soil are problematic and assumed hydric - see soil remarks. Wetland mapped aerially and has large upland berm within middle of it that is taken out of wetland boundaries.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	12	_____	_____
5	_____	_____	_____	_____
		12	= Total Cover	
Herb Stratum	(Plot size: _____)			
1	Juneff Juncus effusus	85	YES	FACW
2	Phaar Phalaris arundinacea	20	NO	FACW
3	Typlat Typha latifolia	5	NO	OBL
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		110	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>5</u>	x 1 = <u>5</u>
FACW species <u>105</u>	x 2 = <u>210</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>110</u> (A)	<u>215</u> (B)
Prevalence Index = B/A = <u>1.9545</u>	

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes X No     

**Remarks:** Sample area has a dominance of hydrophytic vegetation.



SOIL							Sampling Point:		45-3x	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Matrix		Redox Features				Texture	Remarks		
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>				
0-16	10 YR 2/1	100					Silty clay loam	Roots throughout		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)										
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input checked="" type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)							
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)							
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)							
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)							
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)							
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)										
Restrictive Layer (if present): Type: _____ Depth (inches): _____					Hydric Soil Present?  Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Remarks: Soil is darker than a 2/1 and may be obscuring redox features. Soil is problematic and is in a concave position with high water table; primary hydrology and a dominance of hydrophytic vegetation so is therefore assumed hydric. In addition region shows a lack of redox features in wetland areas.										
HYDROLOGY										
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)					Secondary Indicators (2 or more required)					
<input type="checkbox"/> Surface Water (A1)					<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )					
<input checked="" type="checkbox"/> High Water Table (A2)					<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )					
<input checked="" type="checkbox"/> Saturation (A3)					<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )					
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )					<input type="checkbox"/> Drainage Patterns (B10)					
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )					<input type="checkbox"/> Dry-Season Water Table (C2)					
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )					<input type="checkbox"/> Crayfish Burrows (C8)					
<input type="checkbox"/> Surface Soil Cracks (B6)					<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)					<input type="checkbox"/> Shallow Aquitard (D3)					
<input type="checkbox"/> Water-Stained Leaves (B9)					<input checked="" type="checkbox"/> FAC-Neutral Test (D5)					
<input type="checkbox"/> Other (Explain in Remarks)										
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (includes capillary fringe)					Wetland Hydrology Present?  Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:										
Remarks: hydrology evidenced by primary indicators water table and saturation within 12 inches of the soil surface and passes FAC-Neutral Test.										

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Sampling Point: 46-3x Feature ID: U15-3x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/2/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 42N, 12E, 26  
 Local relief (hillside, terrace, etc.): Road slope Local Relief (concave, convex, none): Convex Slope (%): 10  
 Subregion (LRR): D Lat: 41.4528 Long: -120.5492 Datum: NAD83  
 Soil Map Unit Name: Pasquetti Silty Clay Loam, drained NWI classification: FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W15-3x, no wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	12	_____	_____
5	_____	_____	_____	_____
		12	= Total Cover	
Herb Stratum	(Plot size: _____)			
1	Elycap Elymus caput-medusae	20	YES	UPL
2	Brotec Bromus tectorum	25	YES	UPL
3	Elyhis Elymus hispidus	30	YES	UPL
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		75	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 25 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>75</u>	x 5 =	<u>375</u>
Column Totals: <u>75</u> (A)		<u>375</u> (B)
Prevalence Index = B/A = <u>5</u>		

### Hydrophytic Vegetation Indicators:

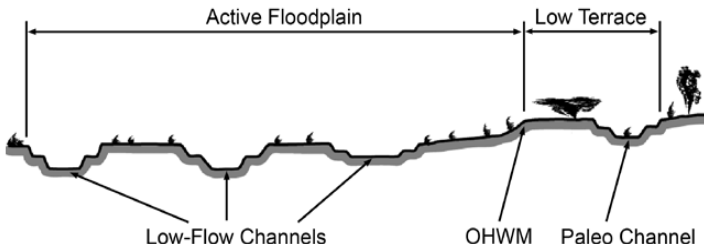
- 1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: No hydrophytic vegetation observed in sample area.

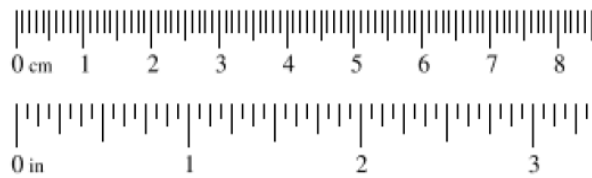
SOIL							Sampling Point: 46-3x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 3/2	100					Clay loam	Sandy patches present
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> No hydric soil indicators at sample point.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed at sample point.								

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 66-4x		<b>Feature ID:</b> D01-4x		<b>Date:</b> 4/7/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Likely, Modoc County CA			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> B. Cohen, M. Gould					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.2291, -120.5040			
<b>Potential anthropogenic influences on the channel system:</b> Excavated, channelized for agriculture, culverts					
<b>Brief site description:</b> Roadside agricultural ditch					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <div style="margin-left: 20px;">           a) Record the floodplain unit and GPS position.            b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.            c) Identify any indicators present at the location.         </div> 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHW M and record the indicators. Record the OHW M position via: <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer         </div> <div style="text-align: center;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:         </div> </div>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



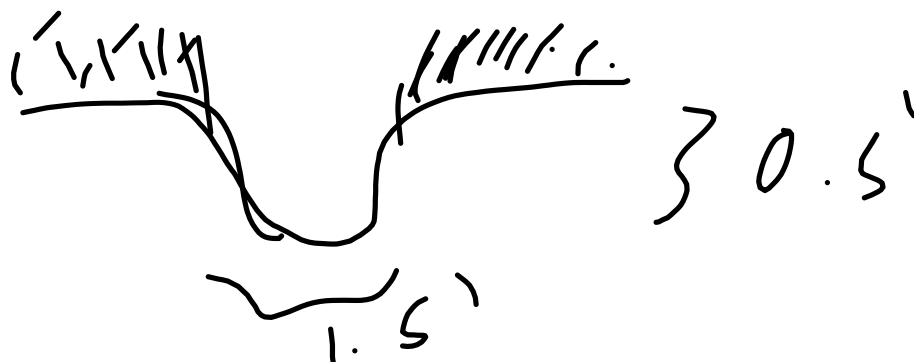
Feature ID: D01-4x

Cross section ID:

Date: 4/7/2020

Time:

**Cross section drawing:**



**OHW**

GPS point: \_\_\_\_\_

**Indicators:**

☐

Change in average sediment texture

☐

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

Mostly unvegetated, no aquatic veg due to canal maintenance

**Floodplain unit:**

☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Early (herbaceous & seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**

☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☐

Presence of bed and bank

☐

Benches

☐

Soil development

☐

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

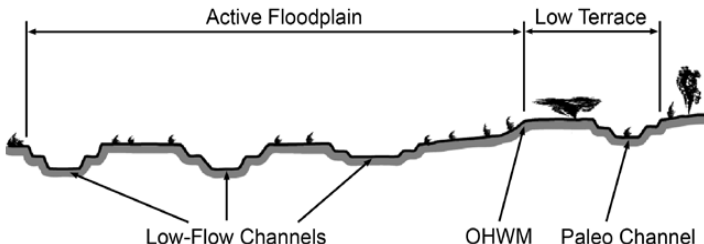
Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 83-4x		<b>Feature ID:</b> D100-4x		<b>Date:</b> 4/9/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> B. Cohen, M. Gould					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 41.0792, -120.4696			
<b>Potential anthropogenic influences on the channel system:</b> Bridge and hwy					
<b>Brief site description:</b> Ephemeral rocky stream.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
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### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D100-4x

Cross section ID:

Date: 4/9/2020

Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☒ Other: Root exposure☐ Other: \_\_\_\_\_**Comments:**

no water present at time of survey.

**Floodplain unit:**☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Feature ID: W17-4x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/3/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 39N, 13E, 05  
 Local relief (hillside, terrace, etc.): Stream bank Local Relief (concave, convex, none): Concave Slope (%): 7  
 Subregion (LRR): D Lat: 41.2458 Long: -120.5046 Datum: NAD83  
 Soil Map Unit Name: Barnard Gravelly Loam, 0 to 9 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks:

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1 <u>Salexi</u>	<u>Salix exigua</u>	<u>70</u>	<u>YES</u>	<u>FACW</u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
5 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>70</u>	= Total Cover	

Herb Stratum (Plot size: <u>6 ft</u> )				
1 <u>Juneff</u>	<u>Juncus effusus</u>	<u>45</u>	<u>YES</u>	<u>FACW</u>
2 <u>Phaaru</u>	<u>Phalaris arundinacea</u>	<u>25</u>	<u>YES</u>	<u>FACW</u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
5 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
6 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
7 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
8 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
9 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
10 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
11 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>70</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>    </u> )				
1 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 20 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>140</u>	x 2 = <u>280</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>140</u> (A)	<u>280</u> (B)
Prevalence Index = B/A = <u>2</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Sample area dominated by FACW vegetation, passes dominance test for hydrophytic vegetation.

SOIL							Sampling Point: 52-4x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-7	10 YR 3/2	100					Clay loam	
7-11	10 YR 4/1	100					Clay loam	Depleted
11-16	10 YR 4/1	55	2.5 YR 2.5/4	45	C	M	Clay loam	Prominent redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input checked="" type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Soil is depleted and shows depleted matrix indicators although the target layer starts 11 inches from the mineral soil surface the layer above the target has a matrix value of 4 or more and a chroma of 2 or less. The target layer has a matrix value of 4 and a chroma of 1 and has a high percentage of prominent redox concentrations and thus the target layer plus the depleted layer above can qualify for indicator F3 depleted matrix and soil is considered hydric.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): 8				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Primary hydrology evidenced by indicator saturation within 12 inches of the soil surface and sample area passes FAC-Neutral Tesst.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Modoc County Feature ID: U17-4x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/3/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 39N, 13E, 05  
 Local relief (hillside, terrace, etc.): Valley floor Local Relief (concave, convex, none): Convex Slope (%): 4  
 Subregion (LRR): D Lat: 41.2458 Long: -120.5046 Datum: NAD83  
 Soil Map Unit Name: Barnard Gravelly Loam, 0 to 9 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W18-3x, no wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>	= Total Cover	

Herb Stratum (Plot size: <u>6 ft</u> )				
1 <u>Brotec</u>	<u>Bromus tectorum</u>	<u>60</u>	<u>YES</u>	<u>UPL</u>
2 <u>Elycap</u>	<u>Elymus caput-medusae</u>	<u>15</u>	<u>YES</u>	<u>UPL</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>75</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 20 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant  
Species Across All Strata: 2 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>75</u>	x 5 = <u>375</u>
Column Totals: <u>75</u> (A)	<u>375</u> (B)
Prevalence Index = B/A = <u>5</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation  
Present?

Yes      No X

Remarks: sample area dominated by upland vegetation.

SOIL							Sampling Point: 53-4x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	7.5 YR 5/4	100					Sandy loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> no hydric soil indicators observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)						Secondary Indicators (2 or more required)		
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Likey, Modoc County Sampling Point: 54-4x Feature ID: W19-4x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/3/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 39N, 13E, 05  
 Local relief (hillside, terrace, etc.): Roadside depression Local Relief (concave, convex, none): Concave Slope (%): 3  
 Subregion (LRR): D Lat: 41.2425 Long: -120.5043 Datum: NAD83  
 Soil Map Unit Name: Buntingville Clay Loam, 0 to 2 percent slopes NWI classification: FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: Fresh Emergent Wetland with all 3 wetland parameters observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>	= Total Cover	

Herb Stratum (Plot size: <u>6 ft</u> )	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
1 <u>Juneff</u>	<u>Juncus effusus</u>	<u>70</u>	<u>YES</u>	<u>FACW</u>
2 <u>Typlat</u>	<u>Typha latifolia</u>	<u>35</u>	<u>YES</u>	<u>OBL</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>105</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>35</u>	x 1 = <u>35</u>
FACW species <u>70</u>	x 2 = <u>140</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>105</u> (A)	<u>175</u> (B)
Prevalence Index = B/A = <u>1.6667</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Sample area dominated by hydrophytic vegetation.



SOIL							Sampling Point: 54-4x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-7	10 YR 2/2	100					Clay loam	
7-16	10 YR 2/2	75	7.5 YR 3/4	25	C	M	Clay loam	Distinct redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input checked="" type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Hydric soils evidenced by indicator F6 by having a layer that is at least 4 inches thick starting within 8 inches of the mineral soil surface with a matrix value of 3 or less and a chroma of 2 or less with at least 5 percent distinct redox concentrations occurring as soft masses.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)						Secondary Indicators (2 or more required)		
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 9 (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>  								
<b>Remarks:</b> Hydrology evidenced by primary indicator saturation within 12 inches of the soil surface and secondary indicators drainage patterns, saturation visible on aerial imagery and area passes FAC-Neutral Test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Likely, Modoc County Sampling Point: 55-4x Feature ID: U19-4x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/3/2020

Investigator(s): B. Cohen, M. Gould Section, Township, Range: 39N, 13E, 05  
 Local relief (hillside, terrace, etc.): Road slope Local Relief (concave, convex, none): Convex Slope (%): 25

Subregion (LRR): D Lat: 41.2425 Long: -120.5043 Datum: NAD83  
 Soil Map Unit Name: Buntingville Clay Loam, 0 to 2 percent slopes NWI classification: FEW

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil Yes, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes      No x  
 Wetland Hydrology Present? Yes      No x

Is the Sampled Area within a Wetland? Yes      No x

Remarks: Upland pair point to W19-4x. Dominant FAC vegetation present, but no hydrology or hydric soil indicators were observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>	= Total Cover	

Herb Stratum (Plot size: <u>    </u> )				
1 <u>Disspi</u>	<u>Distichlis spicata</u>	<u>70</u>	<u>YES</u>	<u>FAC</u>
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>70</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 30 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>70</u>	x 3 = <u>210</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>70</u> (A)	<u>210</u> (B)
Prevalence Index = B/A = <u>3</u>	

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Sample point dominated by FAC vegetation.

SOIL							Sampling Point: 55-4x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	2.5 Y 4/3	100						Gravel throughout
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: road base								
Depth (inches): 6						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Road gravel and fill present. No hydric soil indicators were observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches):						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches):						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches):						
(includes capillary fringe)						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Likey, Modoc County Sampling Point: 56-4x Feature ID: W20-4x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/3/2020

Investigator(s): B. Cohen, M. Gould Section, Township, Range: 39N, 13E, 05  
 Local relief (hillside, terrace, etc.): Linear depression Local Relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR): D Lat: 41.2421 Long: -120.5045 Datum: NAD83  
 Soil Map Unit Name: Buntingville Clay Loam, 0 to 2 percent slopes NWI classification: FEW

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: Fresh Emergent Wetland, all three wetland parameters observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4		<u>12</u>		
5				
		<u>12</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>6 ft</u> )				
1 <u>Schacu</u>	<u>Schoenoplectus acutus</u>	<u>100</u>	<u>YES</u>	<u>OBL</u>
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>100</u>		= Total Cover

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>100</u>	x 1 = <u>100</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>100</u> (B)
Prevalence Index = B/A = <u>1</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

### Hydrophytic

### Vegetation

Present? Yes X No     

Remarks: Sample area dominated by OBL vegetation.

SOIL							Sampling Point: 56-4x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10 YR 2/2	100					Clay loam	
6-16	2.5 Y 3/1	94	10 YR 4/6	6	C	M/PL	Clay loam	Prominent redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)					
<input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Stripped Matrix (S6)								
<input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Loamy Mucky Mineral (F1)								
<input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Gleyed Matrix (F2)								
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> Depleted Matrix (F3)								
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input checked="" type="checkbox"/> Redox Dark Surface (F6)								
<input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Depleted Dark Surface (F7)								
<input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Redox Depressions (F8)								
<input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Vernal Pools (F9)								
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Hydric soil evidenced by indicator F6 with a layer that is at least 4 inches starting within 8 inches of the mineral soil surface and has a matrix value of 3 or less and a chroma of 1 or less with at least 2 percent prominent redox concentrations occurring as soft masses and pore linings.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)						Secondary Indicators (2 or more required)		
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )					
<input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )					
<input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )					
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)					
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)					
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Presence of Reduced Iron (C4)			<input checked="" type="checkbox"/> Crayfish Burrows (C8)					
<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)					
<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Other (Explain in Remarks)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)					
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 13 Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 0 (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>  								
<b>Remarks:</b> Hydrology evidenced by primary indicator saturation within 12 inches of the soil surface, water table is present but is below 12 inches from the surface. In addition saturation is visible on aerial imagery and area passes FAC-Neutral Test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Likely, Modoc County Sampling Point: 57-4x Feature ID: U20-4x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/3/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 39N, 13E, 05  
 Local relief (hillside, terrace, etc.): Road slope Local Relief (concave, convex, none): Convex Slope (%): 25  
 Subregion (LRR): D Lat: 41.2421 Long: -120.5045 Datum: NAD83  
 Soil Map Unit Name: Buntingville Clay Loam, 0 to 2 percent slopes NWI classification: FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W20-4x, no wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: 15 ft _____)			
1 <u>Erinau</u>	<u>Ericameria nauseosa</u>	60	YES	UPL
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	12	_____	_____
5 _____	_____	_____	_____	_____
		72	= Total Cover	
Herb Stratum	(Plot size: 6 ft _____)			
1 <u>Brotec</u>	<u>Bromus tectorum</u>	15	YES	UPL
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
5 _____	_____	_____	_____	_____
6 _____	_____	_____	_____	_____
7 _____	_____	_____	_____	_____
8 _____	_____	_____	_____	_____
9 _____	_____	_____	_____	_____
10 _____	_____	_____	_____	_____
11 _____	_____	_____	_____	_____
		15	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 85 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>75</u>	x 5 = <u>375</u>
Column Totals: <u>75</u> (A)	<u>375</u> (B)
Prevalence Index = B/A = <u>5</u>	

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: No hydrophytic vegetation observed at sample point.

SOIL							Sampling Point:	
57-4x								
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)								
						Indicators for Problematic Hydric Soils <sup>3</sup> :		
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
						<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
Restrictive Layer (if present):					Hydric Soil Present?			
Type: _____ road base								
Depth (inches): _____ 0					Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Remarks: Point is in road slope with gravel fill.								
HYDROLOGY								
Wetland Hydrology Indicators:					Secondary Indicators (2 or more required)			
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)					<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input type="checkbox"/> High Water Table (A2)					<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input type="checkbox"/> Saturation (A3)					<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )					<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )					<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )					<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6)					<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)					<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)					<input type="checkbox"/> FAC-Neutral Test (D5)			
<input type="checkbox"/> Other (Explain in Remarks)								
Field Observations:					Wetland Hydrology Present?			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____								
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____								
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____								
(includes capillary fringe)								
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks: No hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Likely, Modoc County Sampling Point: 58-4x Feature ID: W23-4x  
Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/3/2020  
Investigator(s): B. Cohen, M. Gould Section, Township, Range: 39N, 13E, 05  
Local relief (hillside, terrace, etc.): River bank Local Relief (concave, convex, none): Concave Slope (%): 3  
Subregion (LRR): D Lat: 41.2382 Long: -120.5042 Datum: NAD83  
Soil Map Unit Name: Modoc Sandy Loam, 0 to 9 percent slopes NWI classification: none  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
Are Vegetation No, Soil Yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
Hydric Soil Present? Yes x No       
Wetland Hydrology Present? Yes x No       
Is the Sampled Area within a Wetland? Yes x No     

Remarks: Sample area confirmed as wetland, soils are problematic and assumed hydric - see soil remarks.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft )				
1 <u>Salexi</u>	<u>Salix exigua</u>	<u>70</u>	<u>YES</u>	<u>FACW</u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>70</u>		= Total Cover

Sapling/Shrub Stratum (Plot size: )	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
1 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
5 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u>		= Total Cover

Herb Stratum (Plot size: 6 ft )	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
1 <u>Phaar</u>	<u>Phalaris arundinacea</u>	<u>20</u>	<u>YES</u>	<u>FACW</u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
5 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
6 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
7 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
8 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
9 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
10 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
11 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>20</u>		= Total Cover

Woody Vine Stratum (Plot size: )	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
1 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 80 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>90</u>	x 2 =	<u>180</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>90</u> (A)		<u>180</u> (B)
Prevalence Index = B/A = <u>2</u>		

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Sample area dominated by FACW vegetation.



SOIL		Sampling Point: 58-4x					
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.							
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>							
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>				
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )				
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )				
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Reduced Vertic (F18)				
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )	<input type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Red Parent Material (TF2)				
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )	<input type="checkbox"/> Redox Dark Surface (F6)		<input checked="" type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)						
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)						
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)							
<b>Restrictive Layer (if present):</b>			<b>Hydric Soil Present?</b>				
Type: _____	_____ roots		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Depth (inches): _____	0						
<b>Remarks:</b> Unable to dig soil pit in area due to too many roots present and inability to dig a pit. Sample area has a dominance of hydrophytic vegetation and has three secondary hydrology indicators, therefore soil is assumed hydric and is adjacent to riverine system.							
<b>HYDROLOGY</b>							
<b>Wetland Hydrology Indicators:</b>			<b>Secondary Indicators (2 or more required)</b>				
<b>Primary Indicators (minimum of one required; check all that apply)</b>							
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )				
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )				
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)		<input checked="" type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )				
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input checked="" type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)				
<b>Field Observations:</b>			<b>Wetland Hydrology Present?</b>				
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____						
(includes capillary fringe)							
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>							
<b>Remarks:</b> Hydrology evidenced by drift deposits and drainage patterns on surface from proximity to riverine system, area also passes FAC-Neutral Test.							

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Likely, Modoc County Sampling Point: 59-4x Feature ID: U23-4x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/3/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 39N, 13E, 05  
 Local relief (hillside, terrace, etc.): Road slope Local Relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR): D Lat: 41.2383 Long: -120.5042 Datum: NAD83  
 Soil Map Unit Name: Modoc Sandy Loam, 0 to 9 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

**Remarks:** Upland pair point to W23-4x. Sample area has a dominance of hydrophytic vegetation but no hydrology or hydric soil indicators were observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

<b>Sapling/Shrub Stratum</b> (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>		= Total Cover

<b>Herb Stratum</b> (Plot size: <u>6 ft</u> )				
1	<u>Elyrep</u>	<u>Elymus repens</u>	<u>75</u>	<u>YES</u> <u>FAC</u>
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>75</u>		= Total Cover

<b>Woody Vine Stratum</b> (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 25 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>75</u>	x 3 = <u>225</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>75</u> (A)	<u>225</u> (B)
Prevalence Index = B/A = <u>3</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes X No     

**Remarks:** Sample area dominated by FAC vegetation.

<b>SOIL</b>						Sampling Point: 59-4x		
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	10 YR 3/2	100					Clay loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.
<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
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<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**  
 Type: Thick rock layer  
 Depth (inches): 12

**Hydric Soil Present?**  
 Yes ☐ No ☒

**Remarks:** No hydric soil indicators observed.

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply) <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Surface Water (A1)  <input type="checkbox"/> High Water Table (A2)  <input type="checkbox"/> Saturation (A3)  <input type="checkbox"/> Water Marks (B1) (<b>Nonriverine</b>)  <input type="checkbox"/> Sediment Deposits (B2) (<b>Nonriverine</b>)  <input type="checkbox"/> Drift Deposits (B3) (<b>Nonriverine</b>)  <input type="checkbox"/> Surface Soil Cracks (B6)  <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)  <input type="checkbox"/> Water-Stained Leaves (B9)           </div> <div style="width: 45%;"> <input type="checkbox"/> Salt Crust (B11)  <input type="checkbox"/> Biotic Crust (B12)  <input type="checkbox"/> Aquatic Invertebrates (B13)  <input type="checkbox"/> Hydrogen Sulfide Odor (C1)  <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)  <input type="checkbox"/> Presence of Reduced Iron (C4)  <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)  <input type="checkbox"/> Thin Muck Surface (C7)  <input type="checkbox"/> Other (Explain in Remarks)           </div> </div>	
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Secondary Indicators (2 or more required)
 

☐ Water Marks (B1) (**Riverine**)  
☐ Sediment Deposits (B2) (**Riverine**)  
☐ Drift Deposits (B3) (**Riverine**)  
☐ Drainage Patterns (B10)  
☐ Dry-Season Water Table (C2)  
☐ Crayfish Burrows (C8)  
☐ Saturation Visible on Aerial Imagery (C9)  
☐ Shallow Aquitard (D3)  
☐ FAC-Neutral Test (D5)

**Field Observations:**  
 Surface Water Present? Yes ☐ No ☒ Depth (inches):             
 Water Table Present? Yes ☐ No ☒ Depth (inches):             
 Saturation Present? Yes ☐ No ☒ Depth (inches):             
 (includes capillary fringe)

**Wetland Hydrology Present?**  
 Yes ☐ No ☒

**Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:** No hydrology indicators observed.

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Likely, Modoc County Sampling Point: 60-4x Feature ID: W27-4x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/7/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 39N, 13E, 05  
 Local relief (hillside, terrace, etc.): Floodplain Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 41.2349 Long: -120.5041 Datum: NAD83  
 Soil Map Unit Name: Lakeview Loam, 0 to 2 percent slopes, pit river area, mrla 21 NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: All three wetland parameters present, soils are problematic and assumed hydric - see soil remarks.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator	
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status	
1	_____	_____	_____	_____	
2	_____	_____	_____	_____	
3	_____	_____	_____	_____	
4	_____	_____	_____	_____	
		0	= Total Cover		
Sapling/Shrub Stratum	(Plot size: _____)				
1	_____	_____	_____	_____	
2	_____	_____	_____	_____	
3	_____	_____	_____	_____	
4	_____	0	_____	_____	
5	_____	_____	_____	_____	
		0	= Total Cover		
Herb Stratum	(Plot size: 6 ft _____)				
1	Phaarur	Phalaris arundinacea	100	YES	FACW
2	_____	_____	_____	_____	
3	_____	_____	_____	_____	
4	_____	_____	_____	_____	
5	_____	_____	_____	_____	
6	_____	_____	_____	_____	
7	_____	_____	_____	_____	
8	_____	_____	_____	_____	
9	_____	_____	_____	_____	
10	_____	_____	_____	_____	
11	_____	_____	_____	_____	
		100	= Total Cover		
Woody Vine Stratum	(Plot size: _____)				
1	_____	_____	_____	_____	
2	_____	_____	_____	_____	
		0	= Total Cover		

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>100</u>	x 2 = <u>200</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>200</u> (B)
Prevalence Index = B/A = <u>2</u>	

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Sample area dominated by FACW vegetation.

SOIL							Sampling Point: 60-4x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 3/2	100					Clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input checked="" type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Soils are problematic and are dark but do not show redox features. Sample area is in a concave position with a dominance of hydrophytic vegetation and primary hydrology. Plot is adjacent to a riverine system, which may have Seasonally ponded soils or newly formed wetland soils.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input checked="" type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): 8				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Primary hydrology evidenced by saturation within 12 inches of the soil surface and secondary indicators were observed including drainage patterns and saturation visible on aerial imagery. Sample area passes FAC-Neutral Test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Likely, Modoc County Sampling Point: 61-4x Feature ID: U27-4x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/7/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 39N, 13E, 05  
 Local relief (hillside, terrace, etc.): Road slope Local Relief (concave, convex, none): Convex Slope (%): 25  
 Subregion (LRR): D Lat: 41.2349 Long: -120.5041 Datum: NAD83  
 Soil Map Unit Name: Lakeview Loam, 0 to 2 percent slopes, pit river area, mrla 21 NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W27-4x, no wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4		<u>12</u>		
5				
		<u>12</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>6 ft</u> )				
1 <u>Brotec</u>	<u>Bromus tectorum</u>	<u>20</u>	<u>YES</u>	<u>UPL</u>
2 <u>Unkgrr</u>	<u>Unknown grass</u>	<u>30</u>	<u>YES</u>	<u>FAC</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>50</u>		= Total Cover

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 30 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>30</u>	x 3 =	<u>90</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>20</u>	x 5 =	<u>100</u>
Column Totals: <u>50</u> (A)		<u>190</u> (B)
Prevalence Index = B/A =		<u>3.8</u>

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Unknown grass in upland plot has been mowed and is unidentifiable, labelled FAC. Sample area does not pass dominance test or have a prevalence index less than 3.

SOIL		Sampling Point: 61-4x				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.				<sup>4</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						
<input type="checkbox"/> Histosol (A1)		<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Stripped Matrix (S6)				
<input type="checkbox"/> Black Histic (A3)		<input type="checkbox"/> Loamy Mucky Mineral (F1)				
<input type="checkbox"/> Hydrogen Sulfide (A4)		<input type="checkbox"/> Loamy Gleyed Matrix (F2)				
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )		<input type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )		<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)		<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Thick Dark Surface (A12)		<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)		<input type="checkbox"/> Vernal Pools (F9)				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)						
<b>Restrictive Layer (if present):</b>				<b>Hydric Soil Present?</b>		
Type: _____ road base				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Depth (inches): _____ 0						
<b>Remarks:</b> Unable to dig soil pit in gravel packed road slope. Dry and gravelly, no hydric soil indicators observed and there is not a dominance of hydrophytic vegetation or any hydrology indicators observed so soil is not assumed hydric as wetland pair point is.						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)						
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>				<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____				
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____				
(includes capillary fringe)						
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> No hydrology indicators observed.						

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Likely, Modoc County Sampling Point: 62-4x Feature ID: W29-4x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/7/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 39N, 13E, 05  
 Local relief (hillside, terrace, etc.): Roadside ditch Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 41.2346 Long: -120.5041 Datum: NAD83  
 Soil Map Unit Name: Lakeview Loam, 0 to 2 percent slopes, pit river area, mrla 21 NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: All three wetland parameters observed, soils are problematic and assumed hydric - see soil remarks.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: 30 ft )	% Cover	Species?	Status
1 <u>Popdel</u>	<u>Populus deltoides</u>	<u>80</u>	<u>YES</u>	<u>FAC</u>
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
		<u>80</u>	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____ )			
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	<u>12</u>	_____	_____
5 _____	_____	_____	_____	_____
		<u>12</u>	= Total Cover	
Herb Stratum	(Plot size: 6ft )			
1 <u>Juneff</u>	<u>Juncus effusus</u>	<u>40</u>	<u>YES</u>	<u>FACW</u>
2 <u>Unkgrr</u>	<u>Unknown grass</u>	<u>70</u>	<u>YES</u>	<u>FAC</u>
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
5 _____	_____	_____	_____	_____
6 _____	_____	_____	_____	_____
7 _____	_____	_____	_____	_____
8 _____	_____	_____	_____	_____
9 _____	_____	_____	_____	_____
10 _____	_____	_____	_____	_____
11 _____	_____	_____	_____	_____
		<u>110</u>	= Total Cover	
Woody Vine Stratum	(Plot size: _____ )			
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>40</u>	x 2 =	<u>80</u>
FAC species <u>150</u>	x 3 =	<u>450</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>190</u> (A)		<u>530</u> (B)
Prevalence Index = B/A = <u>2.7895</u>		

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>

     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

     5 - Wetland Non-Vascular Plants<sup>1</sup>

     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: unknown dominant grass labelled FAC. Sample area passes hydrophytic dominance test.



SOIL							Sampling Point: 62-4x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 3/2	100					Clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input checked="" type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)					
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)					
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Soil is problematic. Sample area is dominated by hydrophytic vegetation and has primary hydrology and is in a concave position. Feature is likely seasonally ponded soils and region shows lack of redox features.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): 8						
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Primary hydrology evidenced by saturation within 12 inches of the soil surface and sample area passes FAC-Neutral Test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Likely, Modoc County Sampling Point: 63-4x Feature ID: U29-4x  
Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/7/2020  
Investigator(s): B. Cohen, M. Gould Section, Township, Range: 39N, 13E, 05  
Local relief (hillside, terrace, etc.): Road slope Local Relief (concave, convex, none): Convex Slope (%): 20  
Subregion (LRR): D Lat: 41.2346 Long: -120.5041 Datum: NAD83  
Soil Map Unit Name: Lakeview Loam, 0 to 2 percent slopes, pit river area, mrla 21 NWI classification: none  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x  
Hydric Soil Present? Yes      No x  
Wetland Hydrology Present? Yes      No x  
Is the Sampled Area within a Wetland? Yes      No x

Remarks: Upland pair point to W29-4x, no wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: <u>                    </u> )				
1	<u>                    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2	<u>                    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3	<u>                    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4	<u>                    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u>	= Total Cover	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>                    </u> )				
1	<u>                    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2	<u>                    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3	<u>                    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4	<u>                    </u>	<u>    </u>	<u>    </u>	<u>    </u>
5	<u>                    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u>	= Total Cover	
<b>Herb Stratum</b> (Plot size: <u>                    </u> )				
1	<u>                    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2	<u>                    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3	<u>                    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4	<u>                    </u>	<u>    </u>	<u>    </u>	<u>    </u>
5	<u>                    </u>	<u>    </u>	<u>    </u>	<u>    </u>
6	<u>                    </u>	<u>    </u>	<u>    </u>	<u>    </u>
7	<u>                    </u>	<u>    </u>	<u>    </u>	<u>    </u>
8	<u>                    </u>	<u>    </u>	<u>    </u>	<u>    </u>
9	<u>                    </u>	<u>    </u>	<u>    </u>	<u>    </u>
10	<u>                    </u>	<u>    </u>	<u>    </u>	<u>    </u>
11	<u>                    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u>	= Total Cover	
<b>Woody Vine Stratum</b> (Plot size: <u>                    </u> )				
1	<u>                    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2	<u>                    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 100 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: #DIV/0! (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>0</u> (A)	<u>0</u> (B)
Prevalence Index = B/A = <u>    </u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
     2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: No veg in road slope

SOIL		Sampling Point: 63-4x				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.				<sup>4</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						
<input type="checkbox"/> Histosol (A1)		<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Stripped Matrix (S6)				
<input type="checkbox"/> Black Histic (A3)		<input type="checkbox"/> Loamy Mucky Mineral (F1)				
<input type="checkbox"/> Hydrogen Sulfide (A4)		<input type="checkbox"/> Loamy Gleyed Matrix (F2)				
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )		<input type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )		<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)		<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Thick Dark Surface (A12)		<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)		<input type="checkbox"/> Vernal Pools (F9)				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)						
<b>Restrictive Layer (if present):</b>				<b>Hydric Soil Present?</b>		
Type: _____ road base				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Depth (inches): _____ 0						
<b>Remarks:</b> Unable to dig soil pit in compacted gravel road slope.						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)						
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>				<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____				
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____				
(includes capillary fringe)						
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> No hydrology indicators observed.						

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Likely, Modoc County Sampling Point: 64-4x Feature ID: W30-4x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/7/2020

Investigator(s): B. Cohen, M. Gould Section, Township, Range: 39N, 13E, 05  
 Local relief (hillside, terrace, etc.): Roadside ditch Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 41.2338 Long: -120.5041 Datum: NAD83  
 Soil Map Unit Name: Lakeview Loam, 0 to 2 percent slopes, pit river area, mrla 21 NWI classification: FEW

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: All three wetland parameters observed, soils are problematic and assumed hydric - see soil remarks.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		

= Total Cover

Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1	<u>Popdel</u>	<u>35</u>	<u>YES</u>	<u>FAC</u>
2				
3				
4		<u>12</u>		
5				
		<u>47</u>		

= Total Cover

Herb Stratum (Plot size: <u>6 ft</u> )				
1	<u>Juneff</u>	<u>40</u>	<u>YES</u>	<u>FACW</u>
2	<u>Phaar</u>	<u>85</u>	<u>YES</u>	<u>FACW</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>125</u>		

= Total Cover

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		

= Total Cover

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	<u>0</u> x 1 = <u>0</u>
FACW species	<u>125</u> x 2 = <u>250</u>
FAC species	<u>35</u> x 3 = <u>105</u>
FACU species	<u>0</u> x 4 = <u>0</u>
UPL species	<u>0</u> x 5 = <u>0</u>
Column Totals:	<u>160</u> (A) <u>355</u> (B)
Prevalence Index = B/A = <u>2.2188</u>	

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Sample area passes dominance test for hydrophytic vegetation.

SOIL							Sampling Point: 64-4x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 2/2						Clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Soil is problematic. Soils are dark matrix value and chroma and may obscure redox. Sample area is in a concave position, soils may be Seasonally Ponded Soils (Chapter 5), therefore soils are assumed hydric. In addition region shows lack of redox features.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): 10				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Primary hydrology evidenced by saturation within 12 inches of the soil surface, in addition area passes FAC-Neutral Test.								

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

**Remarks:** Upland pair point to W30-4x, no wetland indicators observed.

**VEGETATION** – Use scientific names of plants. List all species in the plot. **MUST LIST COVER IN DESECENDING ORDER**

**Dominance Test worksheet:**

Number of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant  
Species Across All Strata: 0 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC:  $\#DIV/0!$  (A/B)

Prevalence Index worksheet:			
<u>Total % Cover of:</u>		<u>Multiply by:</u>	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	0	(A)	0 (B)
Prevalence Index = B/A =			

**Hydrophytic Vegetation Indicators:**

☐ 1 - Rapid Test for Hydrophytic Vegetation

☐ 2 - Dominance Test is >50%

☒ 3 - Prevalence Index is  $\leq 3.0$ <sup>1</sup>

☐ 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

☐ 5 - Wetland Non-Vascular Plants<sup>1</sup>

☐ 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation  
Present?      Yes ☐ No ☒

**Remarks:** No veg in road slope

SOIL		Sampling Point: 65-4x					
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.							
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>							
Histosol (A1)		Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>			
Histic Epipedon (A2)		Stripped Matrix (S6)		1 cm Muck (A9) ( <b>LRR C</b> )			
Black Histic (A3)		Loamy Mucky Mineral (F1)		2 cm Muck (A10) ( <b>LRR B</b> )			
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)		Reduced Vertic (F18)			
Stratified Layers (A5) ( <b>LRR C</b> )		Depleted Matrix (F3)		Red Parent Material (TF2)			
1 cm Muck (A9) ( <b>LRR D</b> )		Redox Dark Surface (F6)		Other (Explain in Remarks)			
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)					
Thick Dark Surface (A12)		Redox Depressions (F8)					
Sandy Mucky Mineral (S1)		Vernal Pools (F9)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.			
Sandy Gleyed Matrix (S4)							
<b>Restrictive Layer (if present):</b>				<b>Hydric Soil Present?</b>			
Type: road base				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Depth (inches): 0							
<b>Remarks:</b> Unable to dig soil pit in compacted gravel road slope.							
<b>HYDROLOGY</b>							
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>			
Primary Indicators (minimum of one required; check all that apply)				Water Marks (B1) ( <b>Riverine</b> )			
Surface Water (A1)		Salt Crust (B11)		Sediment Deposits (B2) ( <b>Riverine</b> )			
High Water Table (A2)		Biotic Crust (B12)		Drift Deposits (B3) ( <b>Riverine</b> )			
Saturation (A3)		Aquatic Invertebrates (B13)		Drainage Patterns (B10)			
Water Marks (B1) ( <b>Nonriverine</b> )		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)			
Sediment Deposits (B2) ( <b>Nonriverine</b> )		Oxidized Rhizospheres along Living Roots (C3)		Crayfish Burrows (C8)			
Drift Deposits (B3) ( <b>Nonriverine</b> )		Presence of Reduced Iron (C4)		Saturation Visible on Aerial Imagery (C9)			
Surface Soil Cracks (B6)		Recent Iron Reduction in Tilled Soils (C6)		Shallow Aquitard (D3)			
Inundation Visible on Aerial Imagery (B7)		Thin Muck Surface (C7)		FAC-Neutral Test (D5)			
Water-Stained Leaves (B9)		Other (Explain in Remarks)					
<b>Field Observations:</b>				<b>Wetland Hydrology Present?</b>			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches):		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches):					
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches):					
(includes capillary fringe)							
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>							
<b>Remarks:</b> No hydrology indicators observed.							

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Likely, Modoc County Sampling Point: 67-4x Feature ID: W33-4x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/7/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 39N, 13E, 08  
 Local relief (hillside, terrace, etc.): Ditch Local Relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): D Lat: 41.2271 Long: -120.5041 Datum: NAD83  
 Soil Map Unit Name: Bieber Gravelly Loam, 0 to 9 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: All three wetland parameters observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: _____ )				
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
<b>Sapling/Shrub Stratum</b> (Plot size: _____ )				
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		0	= Total Cover	
<b>Herb Stratum</b> (Plot size: 6 ft _____ )				
1	Phaaru Phalaris arundinacea	25	YES	FACW
2	Rumcri Rumex crispus	8	YES	FAC
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		33	= Total Cover	
<b>Woody Vine Stratum</b> (Plot size: _____ )				
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 70 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>25</u>	x 2 = <u>50</u>
FAC species <u>8</u>	x 3 = <u>24</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>33</u> (A)	<u>74</u> (B)
Prevalence Index = B/A = <u>2.2424</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Sample area dominated by hydrophytic vegetation.



SOIL							Sampling Point: 67-4x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-7	10 YR 4/1	100					Clay lam	
7-16	7.5 YR 4/4	95	7.5 YR 5/8	5	C	M	Loamy sand	Compacted sand
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input checked="" type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Although the layer with redox features is below the depleted layer the 7-inch depleted layer meets criteria for depleted matrix when applying the redox features in the lower layer, therefore soil is assumed depleted and soil is hydric.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): 0						
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Primary hydrology evidenced by saturation within 12 inches of the soil surface, in addition area passes FAC-Neutral Test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

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Project/Site: Zayo Fiberoptic City/County: Likely, Modoc County Sampling Point: 68-4x Feature ID: U33-4x  
Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/7/2020  
Investigator(s): B. Cohen, M. Gould Section, Township, Range: 39N, 13E, 08  
Local relief (hillside, terrace, etc.): Valley floor Local Relief (concave, convex, none): None Slope (%): 4  
Subregion (LRR): D Lat: 41.2271 Long: -120.5041 Datum: NAD83  
Soil Map Unit Name: Bieber Gravelly Loam, 0 to 9 percent slopes NWI classification: none  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x  
Hydric Soil Present? Yes      No x  
Wetland Hydrology Present? Yes      No x  
Is the Sampled Area within a Wetland? Yes      No x

Remarks: Upland pair point to W33-4x, no wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>6 ft</u> )				
1 Unkdan	Unknown danthonia	55	YES	FAC
2 Elycap	Elymus caput-medusae	28	YES	UPL
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>83</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 30 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>55</u>	x 3 =	<u>165</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>28</u>	x 5 =	<u>140</u>
Column Totals: <u>83</u> (A)		<u>305</u> (B)
Prevalence Index = B/A = <u>3.6747</u>		

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Sample area not dominated by hydrophytic vegetation.

SOIL							Sampling Point: 68-4x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	7.5 YR 5/4	100					Clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> No hydric soil indicators observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

**Remarks:** Unable to identify carex, no inflorescence present. Likely carex is FACW or greater but labelled as FAC and area still passes dominance test for hydrophytic vegetation.

SOIL							Sampling Point: 71-4x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-13	10 YR 2/2	100					Clay loam	
13-16	10 YR 2/2	95	2.5 YR 2.5/4	5	C	M	Clay loam	Prominent Redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)					
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)					
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Redox is deeper than needed for standard F6 indicator but due to wet conditions and dark soil color redox above may be obscured and proximity to stream may influence upper layer redox presence. Sample area is dominated by hydrophytic vegetation and has a high water table in a concave surface, therefore soil is assumed hydric.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)						Secondary Indicators (2 or more required)		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input checked="" type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 12 Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 11 (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>  								
<b>Remarks:</b> Primary hydrology evidenced by water table and saturation within 12 inches of the soil surface, in addition drainage patterns were observed in proximity to riverine system.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 72-4x Feature ID: U35-4x  
Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/8/2020  
Investigator(s): B. Cohen, M. Gould Section, Township, Range: 38N, 13E, 08  
Local relief (hillside, terrace, etc.): Forest floor Local Relief (concave, convex, none): None Slope (%): 4  
Subregion (LRR): D Lat: 41.1478 Long: -120.5104 Datum: NAd83  
Soil Map Unit Name: Searles-Orhood-Devada Association, 5 to 30 percent slopes NWI classification: none  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x  
Hydric Soil Present? Yes      No x  
Wetland Hydrology Present? Yes      No x  
Is the Sampled Area within a Wetland? Yes      No x

Remarks: Upland pair point to W35-4x, no wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1	Roscal <i>Rosa californica</i>	35	YES	FAC
2	Arttri <i>Artemisia tridentata</i>	40	YES	UPL
3				
4		12		
5				
		<u>87</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>6 ft</u> )				
1	Dipful <i>Dipsacus fullonum</i>	8	YES	FAC
2	Brotec <i>Bromus tectorum</i>	10	YES	UPL
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>18</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 82 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>43</u>	x 3 = <u>129</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>50</u>	x 5 = <u>250</u>
Column Totals: <u>93</u> (A)	<u>379</u> (B)
Prevalence Index = B/A = <u>4.0753</u>	

### Hydrophytic Vegetation Indicators:

No 1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Area not dominated by hydrophytic vegetation.

SOIL		Sampling Point: 72-4x				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
0-12	10 YR 3/2	100			Loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.			<sup>4</sup> Location: PL=Pore Lining, M=Matrix.			
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
				<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<b>Restrictive Layer (if present):</b>			<b>Hydric Soil Present?</b>			
Type: <u>Rock layer</u> Depth (inches): <u>12</u>			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
<b>Remarks:</b> No hydric soil indicators observed.						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>			<b>Secondary Indicators (2 or more required)</b>			
Primary Indicators (minimum of one required; check all that apply)						
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>			<b>Wetland Hydrology Present?</b>			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </u> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </u> (includes capillary fringe)			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> No hydrology indicators observed.						

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 73-4x Feature ID: W37-4x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/8/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 38N, 13E, 08  
 Local relief (hillside, terrace, etc.): Swale Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 41.1384 Long: -120.508 Datum: NAD83  
 Soil Map Unit Name: Searles-Orhood-Devada Association, 5 to 30 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No       
 Is the Sampled Area within a Wetland? Yes x No     

Remarks: All three wetland parameters observed, soils are problematic and assumed hydric - see soil remarks.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		0	= Total Cover	
Herb Stratum	(Plot size: 6 ft _____)			
1	Poapal Poa palustris	45	YES	FAC
2	Junbal Juncus balticus	15	YES	FACW
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		60	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum:      % Cover of Biotic Crust:     

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	<u>0</u> x 1 = <u>0</u>
FACW species	<u>15</u> x 2 = <u>30</u>
FAC species	<u>45</u> x 3 = <u>135</u>
FACU species	<u>0</u> x 4 = <u>0</u>
UPL species	<u>0</u> x 5 = <u>0</u>
Column Totals:	<u>60</u> (A) <u>165</u> (B)
Prevalence Index = B/A = <u>2.75</u>	

## Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Area dominated by hydrophytic vegetation.



SOIL							Sampling Point: 73-4x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10 YR 2/2	100					Clay loam	Clayey
8-16	10 YR 5/4	100					Clay	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input checked="" type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: _____						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Depth (inches): _____								
<b>Remarks:</b> Soil is problematic and the dark coloration of soils in the first 8 inches may obscure redox features and lower 8 is thick orange clay with a 5/4 color that is very hard to distinguish potential redox features. The sample area is dominated by hydrophytic vegetation and has a high water table in a concave position and is therefore soils are assumed hydric. In addition the region lacks redox features in wetland areas.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> Surface Water (A1)						<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> High Water Table (A2)						<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)						<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )						<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )						<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )						<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)						<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)						<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)						<input type="checkbox"/> Other (Explain in Remarks)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Water Table Present?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): 12					
Saturation Present?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): 0					
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Primary hydrology evidenced by saturation and water table within 12 inches of the soil surface, in addition area passes FAC-Neutral Test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Feature ID: U37-4x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/8/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 38N, 13E, 08  
 Local relief (hillside, terrace, etc.): Forestland Local Relief (concave, convex, none): None Slope (%): 4  
 Subregion (LRR): D Lat: 41.1384 Long: -120.508 Datum: NAD83  
 Soil Map Unit Name: Searles-Orhood-Devada Association, 5 to 30 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W37-4x. Sample area is dominated by hydrophytic vegetation but does not show hydric soil indicators or hydrology indicators.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	12	_____	_____
5	_____	_____	_____	_____
		12	= Total Cover	
Herb Stratum	(Plot size: _____)			
1	Phaaru      Phalaris arundinacea	27	YES	FACW
2	Unkast      Unknown aster	30	YES	FAC
3	Dipful      Dipsacus fullonum	20	YES	FAC
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		77	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 23 % Cover of Biotic Crust:     

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>27</u>	x 2 = <u>54</u>
FAC species <u>50</u>	x 3 = <u>150</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>77</u> (A)	<u>204</u> (B)
Prevalence Index = B/A = <u>2.6494</u>	

## Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Sample area dominated by hydrophytic vegetation.

<b>SOIL</b>						Sampling Point: 74-4x		
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 3/2	100					Loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> No hydric soil indicators observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Feature ID: W38-4x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/8/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 38N, 13E, 17  
 Local relief (hillside, terrace, etc.): Swale Local Relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): D Lat: 41.1308 Long: -120.5023 Datum: NAD83  
 Soil Map Unit Name: Searles-Orhood-Devada Association, 5 to 30 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No       
 Is the Sampled Area within a Wetland? Yes x No     

Remarks: All three wetland parameters observed. Soil is problematic and assumed hydric - see soil remarks.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>6 ft</u> )				
1 <u>Unkcar</u>	<u>Unknown carex</u>	<u>100</u>	<u>YES</u>	<u>FAC</u>
2 <u>Junbal</u>	<u>Juncus balticus</u>	<u>15</u>	<u>NO</u>	<u>FACW</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>115</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>15</u>	x 2 =	<u>30</u>
FAC species <u>100</u>	x 3 =	<u>300</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>115</u> (A)		<u>330</u> (B)
Prevalence Index = B/A = <u>2.8696</u>		

## Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Unknown carex dominant, likely FACW or greater but labelled FAC. Passes dominance test for hydrophytic vegetation.

SOIL							Sampling Point: 75-4x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 2/2	100					Clay loam	Roots throughout
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input checked="" type="checkbox"/> Other (Explain in Remarks)		
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: _____ Depth (inches): _____						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Soil is problematic and is totally inundated and dark which could obscure redox features. Soil is assumed hydric due to high water table (ponding/flooding; Chapter 5 soils) and dominance of hydrophytic vegetation in a concave position.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)								
<input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			Depth (inches): <u>0.5</u>			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			Depth (inches): <u>0</u>					
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (includes capillary fringe)			Depth (inches): <u>0</u>					
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Primary hydrology evidenced by surface water and water table and saturation at the surface.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen cnty Sampling Point: 76-4x Feature ID: U38-4x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/8/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 38N, 13E, 17  
 Local relief (hillside, terrace, etc.): Forestland Local Relief (concave, convex, none): Convex Slope (%): 3  
 Subregion (LRR): D Lat: 41.1308 Long: -120.5023 Datum: NAD83  
 Soil Map Unit Name: Searles-Orhood-Devada Association, 5 to 30 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x  
 Hydric Soil Present? Yes      No x  
 Wetland Hydrology Present? Yes      No x  
 Is the Sampled Area within a Wetland? Yes      No x

Remarks: Upland pair point to W38-4x, no wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1	<u>Arttri</u> <u>Artemisia tridentata</u>	<u>15</u>	<u>YES</u>	<u>UPL</u>
2				
3				
4				
5				
		<u>15</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>6 ft</u> )				
1	<u>Phaar</u> <u>Phalaris arundinacea</u>	<u>18</u>	<u>YES</u>	<u>FACW</u>
2	<u>Brotec</u> <u>Bromus tectorum</u>	<u>45</u>	<u>YES</u>	<u>UPL</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>63</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 37 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)  
 Total Number of Dominant Species Across All Strata: 3 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>18</u>	x 2 =	<u>36</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>45</u>	x 5 =	<u>225</u>
Column Totals: <u>63</u> (A)		<u>261</u> (B)
Prevalence Index = B/A = <u>4.1429</u>		

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Sample area not dominated by hydrophytic vegetation.

SOIL						Sampling Point: 76-4x		
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 2/1	100					Loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> No wetland indicators observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 77-4x Feature ID: W41-4x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/8/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 38N, 13E, 17  
 Local relief (hillside, terrace, etc.): Ditch Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 41.1251 Long: -120.4942 Datum: NAD 83  
 Soil Map Unit Name: Devada-Petescreek-Fiddler Association, 2 to 30 percent slopes NWI classification: FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No       
 Is the Sampled Area within a Wetland? Yes x No     

Remarks: All three wetland parameters observed, soil pit not dug due to high standing water - passes rapid test of FACW dominant veg and primary hydrology.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		0	= Total Cover	
Herb Stratum	(Plot size: 6 ft _____)			
1	Junbal Juncus balticus	30	YES	FACW
2	Phaar Phalaris arundinacea	25	YES	FACW
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		55	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 40 % Cover of Biotic Crust:     

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>55</u>	x 2 = <u>110</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>55</u> (A)	<u>110</u> (B)
Prevalence Index = B/A = <u>2</u>	

## Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Sample area dominated by FACW vegetation.



SOIL		Sampling Point: 77-4x				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.				<sup>4</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						
<input checked="" type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input checked="" type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)					
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)					
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )	<input type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )	<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)						
<b>Restrictive Layer (if present):</b>				<b>Hydric Soil Present?</b>		
Type: _____				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Depth (inches): _____						
<b>Remarks:</b> Soil pit not dug in thick standing water. Passes rapid test, soil assumed hydric due to ponding/flooding.						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)						
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>				<b>Wetland Hydrology Present?</b>		
Surface Water Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Water Table Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):			
Saturation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):			
(includes capillary fringe)						
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> Primary hydrology evidenced by surface water and saturation and water table at the surface. In addition area passes FAC-Neutral Test.						

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 78-4x Feature ID: U41-4x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/8/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 38N, 13E, 17  
 Local relief (hillside, terrace, etc.): Forestland Local Relief (concave, convex, none): Convex Slope (%): 10  
 Subregion (LRR): D Lat: 41.1251 Long: -120.4942 Datum: NAD83  
 Soil Map Unit Name: Devada-Petescreek-Fiddler Association, 2 to 30 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W41-4x, no wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>15 Ft</u> )				
1	Arttri	Artemisia tridentata	75	YES UPL
2				
3				
4				
5				
		<u>75</u>	= Total Cover	

Herb Stratum (Plot size: <u>6ft</u> )				
1	Unk	Unknown	80	YES FAC
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>80</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 20 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>80</u>	x 3 = <u>240</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>75</u>	x 5 = <u>375</u>
Column Totals: <u>155</u> (A)	<u>615</u> (B)
Prevalence Index = B/A = <u>3.9677</u>	

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes      No X

Remarks: unknown grass in upland pair point labelled FAC, does not pass dominance test for hydrophytic vegetation or meet prevalence index criteria.

SOIL		Sampling Point: 78-4x				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
0-16	10 YR 2/1	100			Clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.			<sup>4</sup> Location: PL=Pore Lining, M=Matrix.			
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
				<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<b>Restrictive Layer (if present):</b>				<b>Hydric Soil Present?</b>		
Type: _____ Depth (inches): _____				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> No hydric soil indicators observed.						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)						
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>				<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____				
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (includes capillary fringe)		Depth (inches): _____				
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> No hydrology indicators observed.						

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

**Remarks:** Seasonal wetland with all three indicators present.

Yes ☒ No ☐

**Remarks:** Area dominated by hydrophytic vegetation.

SOIL							Sampling Point: 79-4x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2								Roots
2-6	10 YR 3/2	100						Clay loam
6-16	10 YR 3/2	85	2.5 YR 2.5/4	15	C	M	Clay loam	Prominent redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input checked="" type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Hydric soil evidenced by indicator F6 with a layer that is at least 4 inches starting within 8 inches of the soil surface with a matrix value of 3 or less and a chroma of 2 or less with at least 5 percent prominent redox concentrations occurring as soft masses.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)						Secondary Indicators (2 or more required)		
<input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0.5</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>  								
<b>Remarks:</b> Primary hydrology evidenced by surface water and saturation and water table within 12 inches of the soil surface. In addition area passes FAC-Neutral Test.								

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

**Remarks:** Road slope. Upland pair point to W42-4x, no wetland indicators observed.

Yes ☐ No ☒

**Remarks:** No veg in road slope area

SOIL		Sampling Point: 80-4x						
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.					<sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)		<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>				
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )				
<input type="checkbox"/> Black Histic (A3)		<input type="checkbox"/> Loamy Mucky Mineral (F1)		<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )				
<input type="checkbox"/> Hydrogen Sulfide (A4)		<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Reduced Vertic (F18)				
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )		<input type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Red Parent Material (TF2)				
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )		<input type="checkbox"/> Redox Dark Surface (F6)		<input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)		<input type="checkbox"/> Depleted Dark Surface (F7)						
<input type="checkbox"/> Thick Dark Surface (A12)		<input type="checkbox"/> Redox Depressions (F8)						
<input type="checkbox"/> Sandy Mucky Mineral (S1)		<input type="checkbox"/> Vernal Pools (F9)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b>					<b>Hydric Soil Present?</b>			
Type: <u>road base</u>					Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Depth (inches): <u>0</u>								
<b>Remarks:</b> Unable to dig pit in compacted road slope gravel								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>			
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )				
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )				
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )				
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)				
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> no hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 81-4x Feature ID: W44-4x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/9/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 38N, 13E, 28  
 Local relief (hillside, terrace, etc.): Forest edge Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 41.1041 Long: -120.4776 Datum: NAD 83  
 Soil Map Unit Name: Ravendale Silty Clay, 0 to 2 percent slopes, occasionally flooded NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: Seasonal Wetland with all three wetland indicators present.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator	
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status	
1	_____	_____	_____	_____	
2	_____	_____	_____	_____	
3	_____	_____	_____	_____	
4	_____	_____	_____	_____	
		0	= Total Cover		
Sapling/Shrub Stratum	(Plot size: _____)				
1	_____	_____	_____	_____	
2	_____	_____	_____	_____	
3	_____	_____	_____	_____	
4	_____	_____	_____	_____	
5	_____	_____	_____	_____	
		0	= Total Cover		
Herb Stratum	(Plot size: _____ 6 ft _____)				
1	_____	_____	_____	_____	
2	Alopra	Alopecurus pratensis	85	YES	FACW
3	Junbal	Juncus balticus	50	YES	FACW
4	_____	_____	_____	_____	
5	_____	_____	_____	_____	
6	_____	_____	_____	_____	
7	_____	_____	_____	_____	
8	_____	_____	_____	_____	
9	_____	_____	_____	_____	
10	_____	_____	_____	_____	
11	_____	_____	_____	_____	
		135	= Total Cover		
Woody Vine Stratum	(Plot size: _____)				
1	_____	_____	_____	_____	
2	_____	_____	_____	_____	
		0	= Total Cover		

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>135</u>	x 2 = <u>270</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>135</u> (A)	<u>270</u> (B)
Prevalence Index = B/A = <u>2</u>	

## Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Area dominated by FACW vegetation.



SOIL							Sampling Point: 81-4x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 3/2	80	2.5 YR 3/6	20	C	M/PL	Clay loam	Heavy clay content
								prominent redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)					
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)					
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Hydric soil evidenced by indicator F6 with a layer that is at least 4 inches thick starting within 8 inches of the mineral soil surface and has a matrix value of 3 or less with a value of 2 or less and at least 5 percent prominent redox concentrations occurring as soft masses.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Water Table Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____					
Saturation Present?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): 3					
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Primary hydrology evidenced by saturation within 12 inches of the soil surface. In addition area passes FAC-Neutral Test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 82-4x Feature ID: U44-4x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/9/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 38N, 13E, 28  
 Local relief (hillside, terrace, etc.): Road slope Local Relief (concave, convex, none): Convex Slope (%): 25  
 Subregion (LRR): D Lat: 41.1041 Long: -120.4776 Datum: NAD83  
 Soil Map Unit Name: Ravendale Silty Clay, 0 to 2 percent slopes, occasionally flooded NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W44-4x, no wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

<b>Sapling/Shrub Stratum</b> (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>		= Total Cover

<b>Herb Stratum</b> (Plot size: <u>6 ft</u> )				
1	<u>Elycin</u>	<u>Elymus cinereus</u>	<u>25</u>	<u>YES</u> <u>UPL</u>
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>25</u>		= Total Cover

<b>Woody Vine Stratum</b> (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 60 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant  
Species Across All Strata: 1 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>25</u>	x 5 =	<u>125</u>
Column Totals: <u>25</u> (A)		<u>125</u> (B)
Prevalence Index = B/A = <u>5</u>		

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation  
Present?

Yes      No X

Remarks: No hydrophytic vegetation observed in sample area.

SOIL							Sampling Point:		82-4x	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Matrix		Redox Features				Texture	Remarks		
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>				
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.				
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)										
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			Indicators for Problematic Hydric Soils <sup>3</sup> :				
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )				
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )				
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)				
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)				
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)										
Restrictive Layer (if present):						Hydric Soil Present?				
Type: _____ road base						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Depth (inches): _____ 0										
Remarks: Unable to dig soil pit in compacted road slope with gravel.										
HYDROLOGY										
Wetland Hydrology Indicators:						Secondary Indicators (2 or more required)				
Primary Indicators (minimum of one required; check all that apply)										
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )				
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )				
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )				
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)				
Field Observations:						Wetland Hydrology Present?				
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____								
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (includes capillary fringe)		Depth (inches): _____								
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:										
Remarks: No hydrology indicators observed.										

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 3-5x		<b>Feature ID:</b> D51-5x		<b>Date:</b> 4/9/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Lassen County, Ca			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> B. Cohen, M. Gould					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b>		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.2291, -120.5040		
<b>Potential anthropogenic influences on the channel system:</b> agricultural canal, ag influence and roadways with culverts					
<b>Brief site description:</b> agricultural canal with water present at time of survey.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> _____		<b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and			
<input type="checkbox"/> Existing delineation(s) for site		the most recent event exceeding a 5-year event			
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

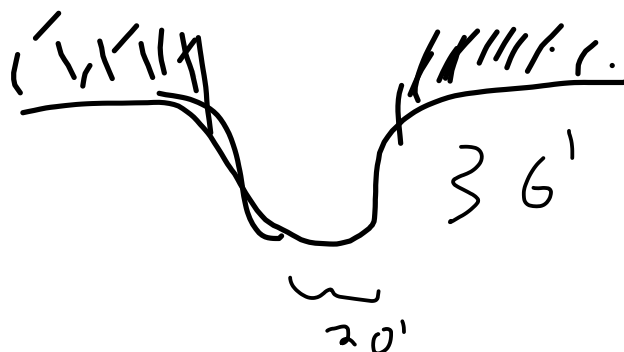


Feature ID: D51-5x

Cross section ID:

Date: 4/9/2020

Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☐

Change in average sediment texture

☐

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

Unable to see bottom of canal with water present but likely has sediment change as well, likely sandy material based on canal side materials present.

**Floodplain unit:**☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Early (herbaceous &amp; seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☐

Presence of bed and bank

☐

Benches

☐

Soil development

☐

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 1-5x Feature ID: W4-5x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/9/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 36N, 13E, 20  
 Local relief (hillside, terrace, etc.): Roadside depression Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 40.9447 Long: -120.5076 Datum: NAD83  
 Soil Map Unit Name: Cochran Very Cobbly Loam, 5 to 15 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No       
 Is the Sampled Area within a Wetland? Yes x No     

Remarks: PVC pipe exposed in wetland. All three wetland parameters observed, soils area problematic and assumed hydric - see soil remarks.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>6 ft</u> )				
1 <u>Junbal</u>	<u>Juncus balticus</u>	<u>85</u>	<u>YES</u>	<u>FACW</u>
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>85</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 5 % Cover of Biotic Crust:     

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>85</u>	x 2 =	<u>170</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>85</u> (A)		<u>170</u> (B)
Prevalence Index = B/A = <u>2</u>		

## Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Area dominated by FACW vegetation.



SOIL							Sampling Point:	1-5x
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10 YR 2/2	100					Clay loam	
5-16	10 YR 4/1	100					Loamy clay	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input checked="" type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Soil is problematic. Although redox not seen in target depleted layer soil is still believed to be hydric with a matrix value of 4 or more and a chroma of 1 or less. Layer above depleted layer is dark in color and may have redox features within it that may be obscured by dark color. Feature is in a concave position with dominant hydrophytic vegetation and primary hydrology, therefore soil likely ponds and is assumed to be hydric.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): 0				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Primary hydrology evidenced by saturation within 12 inches of the soil surface and area passes FAC-Neutral Test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Feature ID: U4-5x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/9/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 36N, 13E, 20  
 Local relief (hillside, terrace, etc.): Sagebrush valley Local Relief (concave, convex, none): Convex Slope (%): 6  
 Subregion (LRR): D Lat: 40.9447 Long: -120.5076 Datum: NAD83  
 Soil Map Unit Name: Cochran Very Cobbly Loam, 5 to 15 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x  
 Hydric Soil Present? Yes      No x  
 Wetland Hydrology Present? Yes      No x  
 Is the Sampled Area within a Wetland? Yes      No x

Remarks: Upland pair point to W4-5x, no wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1 Arttri	Artemisia tridentata	45	YES	UPL
2 Purtri	Purshia tridentata	28	YES	UPL
3				
4				
5				
		<u>73</u>		= Total Cover

Herb Stratum (Plot size: <u>6 ft</u> )				
1 Unk	Unknown	35	YES	FAC
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>35</u>		= Total Cover

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 60 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>35</u>	x 3 = <u>105</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>73</u>	x 5 = <u>365</u>
Column Totals: <u>108</u> (A)	<u>470</u> (B)
Prevalence Index = B/A = <u>4.3519</u>	

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Unknown plant in her stratum labelled FAC. Sample area does not pass dominance test for hydrophytic vegetation.

<b>SOIL</b>		Sampling Point: 2-5x
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>		
Depth (inches)	Matrix	Redox Features
	Color (moist)      %	Color (moist)      %      Type <sup>1</sup> Loc <sup>2</sup> Texture      Remarks
0-16	10 YR 4/1      100	Clay loam      Heavy clay
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____		<b>Hydric Soil Present?</b>  <div style="text-align: right;">           Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> </div>
<b>Remarks:</b> Not believed to be problematic depleted soil, no hydrology indicators observed and sample area is convex and does not pass dominance test for hydrophytic vegetation.		
<b>HYDROLOGY</b>		
<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (2 or more required)</b>
<b>Primary Indicators (minimum of one required; check all that apply)</b>		
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>		<b>Wetland Hydrology Present?</b>
Surface Water Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present?        Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<div style="text-align: right;">           Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> </div>	
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>		
<b>Remarks:</b> No hydrology indicators observed.		

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 4-5x Feature ID: W5-5x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/9/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 35N, 13E, 15  
 Local relief (hillside, terrace, etc.): Swale Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 40.9009 Long: -120.4897 Datum: NAD83  
 Soil Map Unit Name: Dryvalley - Playas complex, 0 to 2 percent slopes NWI classification: fresh FO/Shrub/ FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: Seasonal wetland with all three wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	12	_____	_____
5 _____	_____	_____	_____	_____
		12	= Total Cover	
Herb Stratum	(Plot size: _____)			
1 Unk	Unknown	40	YES	FAC
2 Poapal	Poa palustris	20	YES	FAC
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
5 _____	_____	_____	_____	_____
6 _____	_____	_____	_____	_____
7 _____	_____	_____	_____	_____
8 _____	_____	_____	_____	_____
9 _____	_____	_____	_____	_____
10 _____	_____	_____	_____	_____
11 _____	_____	_____	_____	_____
		60	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 40 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>60</u>	x 3 = <u>180</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>60</u> (A)	<u>180</u> (B)
Prevalence Index = B/A = <u>3</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Unknown plant present labelled as FAC, sample area passes dominance test for hydrophytic vegetation. Plant species is likely FAC or greater (FACW+) due to growth in surface water and high water table.

SOIL							Sampling Point: 4-5x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 4/1	96	5 YR 3/4	4	C	M	Clay loam	prominent redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input checked="" type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Hydric soil evidenced by indicator F3 by having a layer that is at least 2 inches thick starting within 4 inches of the soil surface and has a 60 percent matrix value of 4 or more and a chroma of 2 or less with prominent redox concentrations occurring as soft masses.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input checked="" type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>3</u>						
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>0</u>						
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>0</u>						
(includes capillary fringe)						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Primary hydrology evidenced by surface water and a water table and saturation within 12 inches of the soil surface.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 5-5x Feature ID: U5-5x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/9/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 35N, 13E, 15  
 Local relief (hillside, terrace, etc.): Valley sagebrush Local Relief (concave, convex, none): None Slope (%): 5  
 Subregion (LRR): D Lat: 40.9009 Long: -120.4897 Datum: NAD83  
 Soil Map Unit Name: Dryvalley - Playas complex, 0 to 2 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W5-5x, no wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1	Arttri	Artemisia tridentata	45	YES UPL
2				
3				
4				
5				
		<u>45</u>		= Total Cover

Herb Stratum (Plot size: <u>6 ft</u> )				
1	Brotec	Bromus tectorum	75	YES UPL
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>75</u>		= Total Cover

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 25 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>120</u>	x 5 = <u>600</u>
Column Totals: <u>120</u> (A)	<u>600</u> (B)
Prevalence Index = B/A = <u>5</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes      No X

Remarks: No hydrophytic vegetation observed in sample area.

SOIL							Sampling Point: 5-5x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	7.5 YR 5/1	100					Clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Soil may seem to have depleted matrix value and chroma but no redox features observed, and no hydrophytic vegetation or hydrology indicators observed therefore soil is not assumed hydric.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 6-5x Feature ID: NW01-5x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/10/2020

Investigator(s): M. Oats, R. Stoddard Section, Township, Range: 35N, 13E, 25  
 Local relief (hillside, terrace, etc.): Valley Floor Local Relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): D Lat: 40.8594 Long: -120.4513 Datum: NAD83  
 Soil Map Unit Name: Ravendale Silty Clay, 0 to 2 percent slopes, occasionally flooded NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ No, Soil ☐ No, or Hydrology ☐ No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

Remarks: Area appeared to be potential playa, however, the sample point lacks hydric soil and salt crust.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: )				
1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)				
1 Arttri	Artemisia tridentata	20	YES	UPL
2 Erinau	Ericameria nauseosa	15	YES	UPL
3				
4				
5				
		35	= Total Cover	

Herb Stratum (Plot size: 5' radius)				
1 Poasec	Poa secunda	15	YES	FACU
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		15	= Total Cover	

Woody Vine Stratum (Plot size: )				
1				
2				
		0	= Total Cover	

%Bare Ground in Herb Stratum: 85 % Cover of Biotic Crust:

### Dominance Test worksheet:

Number of Dominant Species  
 That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant  
 Species Across All Strata: 3 (B)

Percent of Dominant Species  
 That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 0	x 3 = 0
FACU species 15	x 4 = 60
UPL species 35	x 5 = 175
Column Totals: 50 (A)	235 (B)
Prevalence Index = B/A = 4.7	

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
 No 2 - Dominance Test is >50%  
 No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
 Vegetation  
 Present?

Yes ☐ No ☒

Remarks: No hydrophytic vegetation present



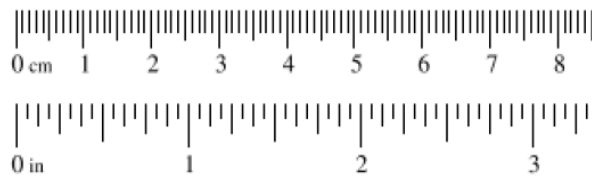
SOIL							Sampling Point: 6-5x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR 4/1	70					Sandy clay	
0-2	10YR 3/1	30					Sandy clay	
2-8	10YR 3/2	60					Sandy clay loam	
2-8	10YR 3/1	40					Sandy clay loam	
8-14	10YR 4/2	100					Loamy sand	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: <u>Shovel refusal</u>								
Depth (inches): <u>14</u>						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> No hydric soil indicators observed. Soil shows depleted matrix value and chroma but no redox features were observed and sample area does not have hydrophytic vegetation therefore soil is not considered problematic or hydric.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input checked="" type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input checked="" type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>4</u>						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u> </u>						
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>0</u>				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology present. Appears to be pooled storm water from recent precipitation.								

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 03-6x		<b>Feature ID:</b> D01-6x		<b>Date:</b> 4/7/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, R. Stoddard					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b>		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 40.7534, -120.3297		
<b>Potential anthropogenic influences on the channel system:</b> Along highway. Feature runs through culvert.					
<b>Brief site description:</b> Ponded water flows from underside of highway. Adjacent to fresh-emergent wetland.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> _____		<b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

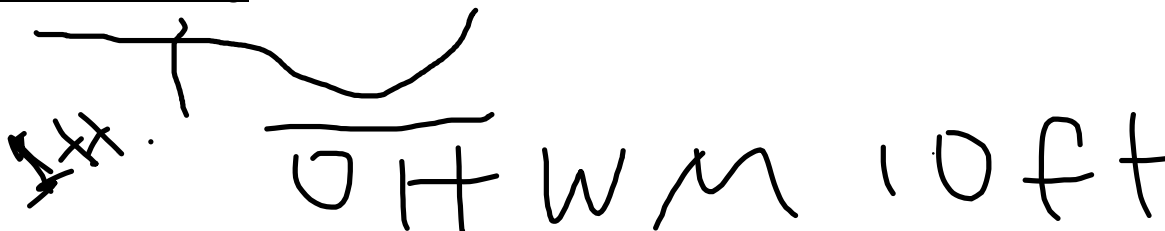


Feature ID: D01-6x

Cross section ID:

Date: 4/7/2020

Time:

**Cross section drawing:****OHWM**

GPS point: \_\_\_\_\_

**Indicators:**☐

Change in average sediment texture

☐

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

Stream has intermittent flow as indicated by a break in slope and a lack of vegetation in the bed. Water present at time of survey.

**Floodplain unit:**☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Early (herbaceous &amp; seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

**Indicators:**☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☐

Presence of bed and bank

☐

Benches

☐

Soil development

☐

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

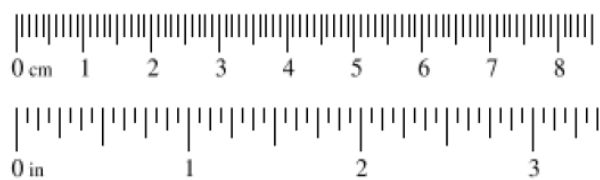
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 04-6x		<b>Feature ID:</b> D02-6x		<b>Date:</b> 4/7/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, R. Stoddard					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b>		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 41.7455, -120.3238		
<b>Potential anthropogenic influences on the channel system:</b> Culvert, highway.					
<b>Brief site description:</b> Along highway. Feature runs through culvert. Wetland feature present on other side of highway.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> _____		<b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D02-6x

Cross section ID:

Date: 4/7/2020

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☐

Change in average sediment texture

☐

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

Comments:

Ephemeral stream present. Some vegetation present within bank, however water flow is present throughout channel.

Floodplain unit:☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Early (herbaceous &amp; seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

Indicators:☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☐

Presence of bed and bank

☐

Benches

☐

Soil development

☐

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

Comments:



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

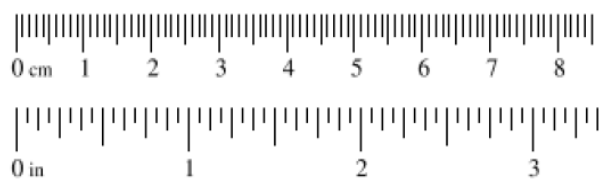
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 08-6x		<b>Feature ID:</b> D03-6x		<b>Date:</b> 4/8/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Modoc County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, R. Stoddard					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.7232, -120.3079			
<b>Potential anthropogenic influences on the channel system:</b> Stream flows under highway through culvert.					
<b>Brief site description:</b> Ephemeral stream flows from culvert outside of right of way to private property ranching area.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography <b>Dates:</b> _____		<input type="checkbox"/> Stream gage data <b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies		Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<b>Hydrogeomorphic Floodplain Units</b>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

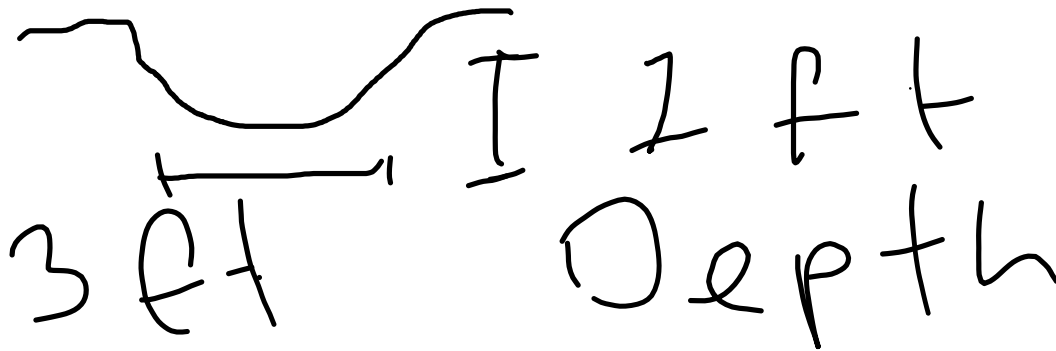


Feature ID: D03-6x

Cross section ID:

Date: 4/8/2020

Time:

Cross section drawing:OHW

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Ephemeral stream has a moderate break in slope with small boulders in bed. Water present at time of survey.

Floodplain unit:☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

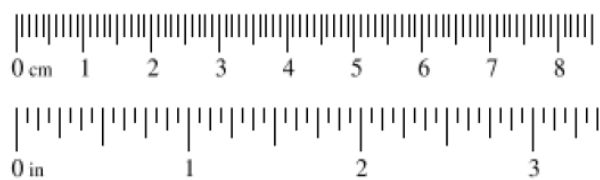
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 15-6x		<b>Feature ID:</b> D05-6x		<b>Date:</b> 4/9/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats. R. Stoddard					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>		Do normal circumstances exist on the site?		<b>Location Details:</b>	
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>		Is the site significantly disturbed?			
				<b>Projection:</b> Lambert <b>Datum:</b> NAD83	
				<b>Coordinates:</b> 40.6421, -120.2557	
<b>Potential anthropogenic influences on the channel system:</b> Boulder road fill, stream flows under highway in culvert.					
<b>Brief site description:</b> Stream likely perennial and exhibits dense riparian corridor.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> _____		<b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps		Period of record: _____			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

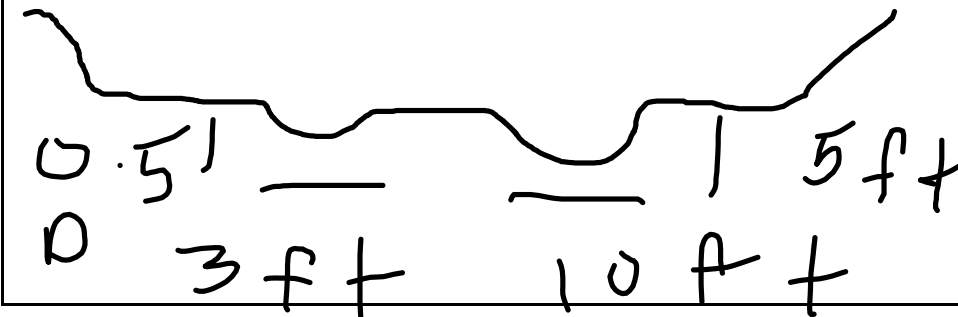


Feature ID: D05-6x

Cross section ID:

Date: 4/9/2020

Time:

**Cross section drawing:****OHWL**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Two stream channels with varying OHWM's. Larger channel to north. Sediment is sandy on bed of bank.

**Floodplain unit:**☐ Low-Flow Channel☒ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**Average sediment texture: Silty loamTotal veg cover: 100 % Tree: 10 % Shrub: 80 % Herb: 10 %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☒ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☒ Drift and/or debris☒ Presence of bed and bank☒ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Active floodplain has dense riparian vegetation between two stream channels.



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

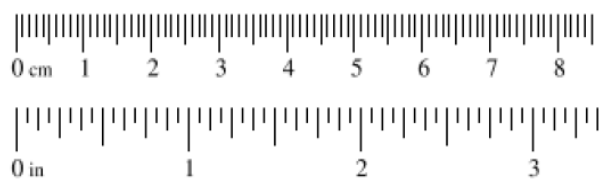
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 16-6x		<b>Feature ID:</b> D06-6x		<b>Date:</b> 4/9/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, R. Stoddard					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>		Do normal circumstances exist on the site?		<b>Location Details:</b>	
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>		Is the site significantly disturbed?			
				<b>Projection:</b> Lambert <b>Datum:</b> NAD83	
				<b>Coordinates:</b> 40.6351, -120.2527	
<b>Potential anthropogenic influences on the channel system:</b> Boulder road fill, stream flows under highway in culvert.					
<b>Brief site description:</b> Ephemeral stream. Intermittent at time of survey.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> _____		<b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and			
<input type="checkbox"/> Existing delineation(s) for site		the most recent event exceeding a 5-year event			
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

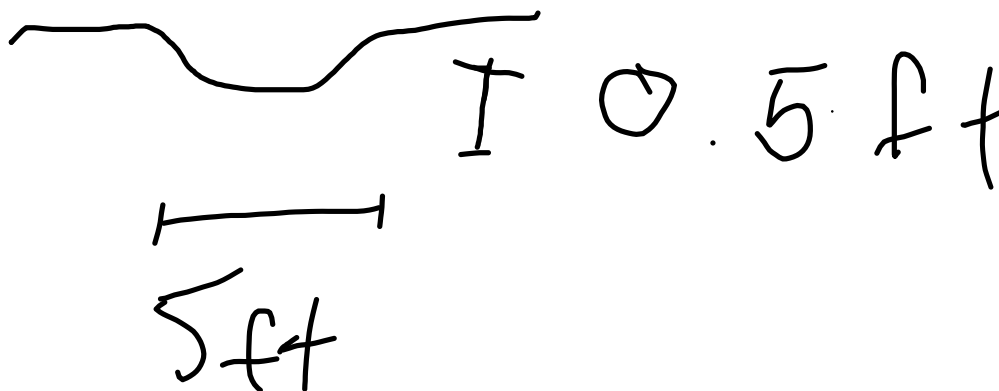


Feature ID: D06-6x

Cross section ID:

Date: 4/9/2020

Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

**Comments:**

Ephemeral stream has indicators throughout however, loses indicators at certain sections. Pooled water in sections. Pools present at time of survey. Boulder sized rocks present throughout feature.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



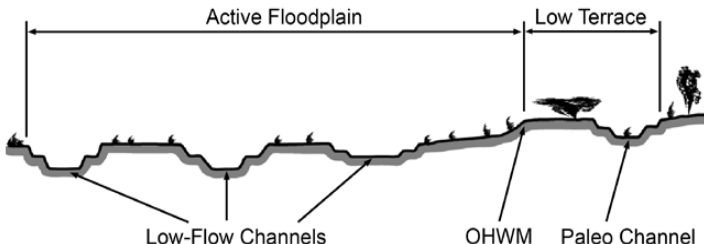
Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

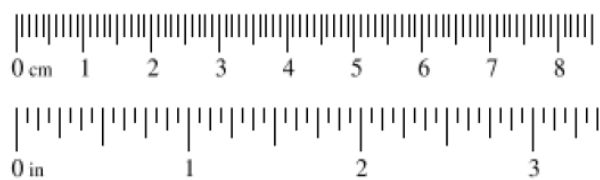
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 12-6x		<b>Feature ID:</b> D50-6xb		<b>Date:</b> 4/9/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, R. Stoddard					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.6684, -120.2836			
<b>Potential anthropogenic influences on the channel system:</b> Stream flows under highway through culvert.					
<b>Brief site description:</b> Ephemeral stream travels under highway creating plunge pool with surface water. Ephemeral stream continues after plunge pool.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHW M and record the indicators. Record the OHW M position via: <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input type="checkbox"/> Mapping on aerial photograph  <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Digitized on computer  <input type="checkbox"/> Other:         </div>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

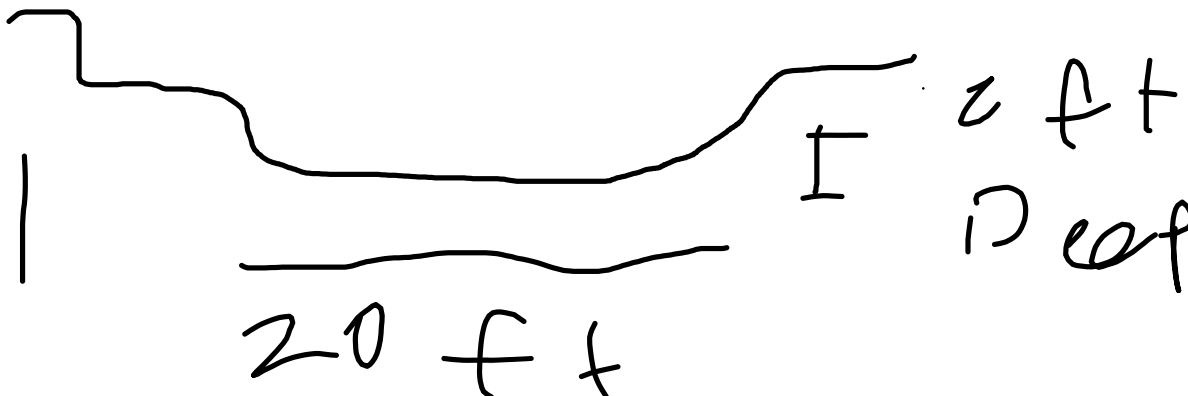


Feature ID: D50-6xb

Cross section ID:

Date: 4/9/2020

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☐

Change in average sediment texture

☐

Change in vegetation species

☒

Change in vegetation cover

☒

Break in bank slope

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

Comments:

OHWM at side part of plunge pool with water present. Feature becomes ephemeral stream at down stream end of plunge pool.

Floodplain unit:☐

Low-Flow Channel

☐

Active Floodplain

☐

Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐

NA

☐

Early (herbaceous &amp; seedlings)

☐

Mid (herbaceous, shrubs, saplings)

☐

Late (herbaceous, shrubs, mature trees)

Indicators:☐

Mudcracks

☐

Ripples

☐

Drift and/or debris

☐

Presence of bed and bank

☐

Benches

☐

Soil development

☐

Surface relief

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

☐

Other: \_\_\_\_\_

Comments:



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA <input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Mid (herbaceous, shrubs, saplings) <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks <input type="checkbox"/> Ripples <input type="checkbox"/> Drift and/or debris <input type="checkbox"/> Presence of bed and bank <input type="checkbox"/> Benches		<input type="checkbox"/> Soil development <input type="checkbox"/> Surface relief <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	
<b>Comments:</b>   			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA <input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Mid (herbaceous, shrubs, saplings) <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks <input type="checkbox"/> Ripples <input type="checkbox"/> Drift and/or debris <input type="checkbox"/> Presence of bed and bank <input type="checkbox"/> Benches		<input type="checkbox"/> Soil development <input type="checkbox"/> Surface relief <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	
<b>Comments:</b>   			

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Feature ID: W01-6x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/7/2020  
 Investigator(s): M. Oats, B. Cohen Section, Township, Range: 33N, 15E, 06  
 Local relief (hillside, terrace, etc.): valley floor Local Relief (concave, convex, none): concave Slope (%): 1  
 Subregion (LRR): D Lat: 40.7533 Long: -120.3295 Datum: NAD83  
 Soil Map Unit Name: Ravendale Silty Clay, 0 to 2 percent slopes NWI classification: FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: Hydrophytic vegetation and hydrology are present. Soil is problematic and assumed hydric - see soil remarks.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
5 _____	_____	_____	_____	_____
		0	= Total Cover	
Herb Stratum	(Plot size: _____ 5' radius)			
1 <u>Phaaruru</u>	<u>Phalaris arundinacea</u>	<u>100</u>	<u>YES</u>	<u>FACW</u>
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
5 _____	_____	_____	_____	_____
6 _____	_____	_____	_____	_____
7 _____	_____	_____	_____	_____
8 _____	_____	_____	_____	_____
9 _____	_____	_____	_____	_____
10 _____	_____	_____	_____	_____
11 _____	_____	_____	_____	_____
		100	= Total Cover	
Woody Vine Stratum	(Plot size: _____ 30' radius)			
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>100</u>	x 2 = <u>200</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>200</u> (B)
Prevalence Index = B/A = <u>2</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Sample area dominated by FACW vegetation.

SOIL							Sampling Point: 01-6x	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	10YR-2/2	100					Loam	Organic matter present
3-16	10YR-3/3	100					Clay loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input checked="" type="checkbox"/> Other (Explain in Remarks)
--	---	---

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	--

**Remarks:** Soils are problematic. Upper layer has a dark matrix color. Sample area is in a concave position with dominant wetland vegetation and primary hydrology, soils are likely seasonally ponded; therefore soils are assumed hydric. In addition region lacks redox features in wetland areas.

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Biotic Crust (B12) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (2 or more required) <input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
--	--

<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 3 (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	--

**Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:** Primary hydrology evidenced by saturation within 12 inches of the soil surface and water stained leaves. In addition area passes FAC-Neutral Test.

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 02-6x Feature ID: U01-6x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/7/2020  
 Investigator(s): M. Oats, R. Stoddard Section, Township, Range: 33N, 15E, 06  
 Local relief (hillside, terrace, etc.): Roadslope Local Relief (concave, convex, none): Convex Slope (%): 3  
 Subregion (LRR): D Lat: 40.7533 Long: -120.3295 Datum: NAD83  
 Soil Map Unit Name: Ravendale Silty Clay, 0 to 2 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x  
 Hydric Soil Present? Yes      No x  
 Wetland Hydrology Present? Yes      No x  
 Is the Sampled Area within a Wetland? Yes      No x

Remarks: Upland pair point to W01-6x, sample point does not have hydric soils, hydrophytic vegetation or hydrology.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: <u>5' radius</u> )				
1	Arttri <i>Artemisia tridentata</i>	60	YES	UPL
2				
3				
4				
5				
		60	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>5' radius</u> )				
1	Phaar <i>Phalaris arundinacea</i>	40	YES	FACW
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		40	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: <u>30' radius</u> )				
1				
2				
		0	= Total Cover	

%Bare Ground in Herb Stratum: 60 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>40</u>	x 2 =	<u>80</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>40</u> (A)		<u>80</u> (B)
Prevalence Index = B/A = <u>2</u>		

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Prevalence index is should be 3.8 due to Upland pland and therefore hydrophytic vegetation is not present.

SOIL							Sampling Point: 02-6x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10 YR 4/2	50					Loam	Roadfill present throughout
0-8	5 YR 3/3	50					Loam	Roadfill present throughout
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b> Type: _____ road base Depth (inches): _____ 8						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> No hydric soil indicators observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)						Secondary Indicators (2 or more required)		
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 05-6x Feature ID: W02-6x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/8/2020  
 Investigator(s): M. Oats, R. Stoddard Section, Township, Range: 33N, 15E, 07  
 Local relief (hillside, terrace, etc.): Valley floor Local Relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): D Lat: 40.7424 Long: -120.322 Datum: NAD83  
 Soil Map Unit Name: Truax Sandy Loam, 0 to 5 percent slopes NWI classification: FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No     

Is the Sampled Area within a Wetland? Yes x No     

Remarks: Seasonal wetland, all three wetland parameters observed, soil is problematic and assumed hydric - see soil remarks.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>5' radius</u> )				
1 <u>Junbal</u>	<u>Juncus balticus</u>	<u>20</u>	<u>YES</u>	<u>FACW</u>
2 <u>Elyely</u>	<u>Elymus elymoides</u>	<u>10</u>	<u>YES</u>	<u>FACU</u>
3 <u>Cryalo</u>	<u>Crypsis alopecuroides</u>	<u>10</u>	<u>YES</u>	<u>OBL</u>
4				
5				
6				
7				
8				
9				
10				
11				
		<u>40</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 50 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>10</u>	x 1 =	<u>10</u>
FACW species <u>20</u>	x 2 =	<u>40</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>10</u>	x 4 =	<u>40</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>40</u> (A)		<u>90</u> (B)
Prevalence Index = B/A =		<u>2.25</u>

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Hydrophytic vegetation present as indicated by a positive prevalence index and is dominated by hydrophytic vegetation.

SOIL							Sampling Point: 05-6x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10 YR 3/1	100					Silty clay	
8-12	10 YR 4/3	80	7.5 YR 4/4	5			Cay	Faint redox
8-12	7.5 YR 4/1	15					Clay	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) (LRR C)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) (LRR B)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) (LRR C)			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)			<input type="checkbox"/> Redox Dark Surface (F6)			<input checked="" type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: <u>Shovel refusal</u>								
Depth (inches): <u>12</u>						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Soil is problematic. Soil shows depleted matrix colors with values 4 or more and chroma of 1 or less but is not 60 percent dominant in the target layer. The target layer shows faint redox concentrations. These elements do not strictly meet the criteria for indicators F3 or F6 but show nearly all requirements. Since the sample area is in a concave position, seasonally flooded, and on the edge of the wetland, soil is assumed hydric. In addition many wetlands in region lack redox features.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input checked="" type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) (Riverine)		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) (Riverine)		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) (Riverine)		
<input type="checkbox"/> Water Marks (B1) (Nonriverine)			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input checked="" type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>0.5</u>						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u> </u>						
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>0</u>				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicators present as indicated by surface water and saturation within 12 inches of the soil surface. In addition surface soil cracks were observed and area passes FAC-Neutral Test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 06-6x Feature ID: U02-6x  
 Applicant/Owner: Zayo Group State: CA Sampling Date: 4/8/2020  
 Investigator(s): M. Oats, R. Stoddard Section, Township, Range: 33N, 15E, 07  
 Local relief (hillside, terrace, etc.): Valley floor Local Relief (concave, convex, none): Convex Slope (%): 1  
 Subregion (LRR): D Lat: 40.7422 Long: -120.3219 Datum: NAD83  
 Soil Map Unit Name: Truax Sandy Loam, 0 to 5 percent slopes NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W02-6x. No wetland parameters observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

Sapling/Shrub Stratum (Plot size: <u>5' radius</u> )				
1	<u>Arttri</u> <u>Artemisia tridentata</u>	<u>5</u>	<u>YES</u>	<u>UPL</u>
2				
3				
4				
5				
		<u>5</u>		= Total Cover

Herb Stratum (Plot size: <u>5' radius</u> )				
1	<u>Elyely</u> <u>Elymus elymoides</u>	<u>40</u>	<u>YES</u>	<u>FACU</u>
2	<u>Elytra</u> <u>Elymus trachycaulus</u>	<u>30</u>	<u>YES</u>	<u>FACU</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>70</u>		= Total Cover

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 30 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>70</u>	x 4 = <u>280</u>
UPL species <u>5</u>	x 5 = <u>25</u>
Column Totals: <u>75</u> (A)	<u>305</u> (B)
Prevalence Index = B/A = <u>4.0667</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Hydrophytic vegetation not observed.



SOIL							Sampling Point: 06-6x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	10 YR 3/2	100					Silty loam	Organic matter present
3-14	10 YR 4/3	100					Silty clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Sample point lacks hydric soil indicators.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 09-6x Feature ID: W03-6x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/8/2020  
 Investigator(s): M. Oats, R. Stoddard Section, Township, Range: 33N, 15E, 17  
 Local relief (hillside, terrace, etc.): Valley floor Local Relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): D Lat: 40.7193 Long: -120.3061 Datum: NAD83  
 Soil Map Unit Name: Indiano-Searles Association, 5 to 30 percent slopes NWI classification: FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
 Are Vegetation Yes, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x  
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No       
 Is the Sampled Area within a Wetland? Yes      No x

**Remarks:** Area dominated by FACU species however, sample point contains hydric soil indicator F6 and has indicators of hydrology, therefore vegetation is problematic and area is considered wetland.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>5' radius</u> )				
1	Broine <u>Bromus inermis</u>	<u>70</u>	<u>YES</u>	<u>FACU</u>
2	Leycin <u>Leymus cinereus</u>	<u>15</u>	<u>NO</u>	<u>FAC</u>
3	Leytri <u>Leymus triticoides</u>	<u>15</u>	<u>NO</u>	<u>FAC</u>
4				
5				
6				
7				
8				
9				
10				
11				
		<u>100</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>30</u>	x 3 =	<u>90</u>
FACU species <u>70</u>	x 4 =	<u>280</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>100</u> (A)		<u>370</u> (B)
Prevalence Index = B/A =		<u>3.7</u>

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

**Remarks:** Area dominated by FACU species but feature is in a concave position with hydric soil indicators and hydrology which likely indicate vegetation has not changed in recent wetland development or hydrology has changed and area is likely wetland with problematic vegetation. FACU species may occur in wet areas and the presence of two other species that are both FAC supports this assertion that the wet area has problematic vegetation and is wetland.

SOIL							Sampling Point: 09-6x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10 YR 3/1	100					Loam	Roots throughout
4-12	10 YR 2/1	95	10 YR 5/8	5			Clay loam	prominent redox
12-16	10 YR 2/1	98	2.5 YR 3/4	2			Clay loam	prominent redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input checked="" type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Soil satisfies indicator redox dark surface because it has a layer of at least four inches thick starting within 8 inches of the mineral soil surface and has a matrix value of three or less with a chroma of one or less and at least two percent prominent redox concentrations.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)						Secondary Indicators (2 or more required)		
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>  								
<b>Remarks:</b> Hydrology evidenced by the presence of water stained leaves and drainage patterns.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Feature ID: U03-6x  
 Applicant/Owner: Zayo Group State: CA Sampling Date: 4/8/2020  
 Investigator(s): M. Oats, R. Stoddard Section, Township, Range: 33N, 15E, 17  
 Local relief (hillside, terrace, etc.): Valley floor Local Relief (concave, convex, none): Convex Slope (%): 8  
 Subregion (LRR): D Lat: 40.7193 Long: -120.3061 Datum: NAD83  
 Soil Map Unit Name: Indiano-Searles Association, 5 to 30 percent slopes NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W03-6x, no wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>15' radius</u> )				
1	Erinau	Ericameria nauseosa	10	YES UPL
2	Arttri	Artemisia tridentata	15	YES UPL
3				
4				
5				
		25	= Total Cover	

Herb Stratum (Plot size: <u>5' radius</u> )				
1	Brotec	Bromus tectorum	40	YES UPL
2	Tradub	Tragopogon dubius	20	YES UPL
3				
4				
5				
6				
7				
8				
9				
10				
11				
		60	= Total Cover	

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		0	= Total Cover	

%Bare Ground in Herb Stratum: 40 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>85</u>	x 5 = <u>425</u>
Column Totals: <u>85</u> (A)	<u>425</u> (B)
Prevalence Index = B/A = <u>5</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Hydrophytic vegetation not observed.

SOIL							Sampling Point: 10-6x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10 YR 3/2	100					Sandy loam	Gravel throughout
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: <u>Road base</u>								
Depth (inches): <u>8</u>						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Sample point lacks hydric soil indicators.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): <u>          </u>						
(includes capillary fringe)						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Feature ID: W05-6x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/8/2020  
 Investigator(s): M. Oats, R. Stoddard Section, Township, Range: 33N, 15E, 33  
 Local relief (hillside, terrace, etc.): Valley floor Local Relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): D Lat: 40.6819 Long: -120.2894 Datum: NAD83  
 Soil Map Unit Name: Tunnison Very Cobbly Clay, 2 to 9 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No     

Is the Sampled Area within a Wetland? Yes x No     

Remarks: Potential seep with standing water that appears to be sustained for long periods. Soil pit not dug due to standing water, hydric soils assumed from other indicators and reasonable assumption of hydric soils.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>5' radius</u> )				
1 <u>Poapra</u>	<u>Poa pratensis</u>	<u>10</u>	<u>YES</u>	<u>FAC</u>
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>10</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 90 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>10</u>	x 3 =	<u>30</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>10</u> (A)		<u>30</u> (B)
Prevalence Index = B/A =		<u>3</u>

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- Yes 2 - Dominance Test is >50%
- Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants<sup>1</sup>
- 6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Area dominated by FAC vegetation, passes dominance test for hydrophytic vegetation.

SOIL		Sampling Point: 11-6x				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.				<sup>4</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						
<input checked="" type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input checked="" type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)					
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)					
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )	<input type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )	<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)						
<b>Restrictive Layer (if present):</b>			<b>Hydric Soil Present?</b>			
Type: _____			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Depth (inches): _____						
<b>Remarks:</b> No soil pit due to presence of deep surface water, hydric soil assumed due to hydrophytic vegetation and primary hydrology in a concave surface with standing water.						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>			<b>Secondary Indicators (2 or more required)</b>			
Primary Indicators (minimum of one required; check all that apply)						
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Aquatic Invertebrates (B13)		<input checked="" type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)			
<input checked="" type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>			<b>Wetland Hydrology Present?</b>			
Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): 6	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): 0				
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): 0				
(includes capillary fringe)						
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> Area ponded with 6 inches of stranding water. Potential seep. Many primary and secondary hydrology indicators present.						

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Feature ID: U05-6x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/8/2020  
 Investigator(s): M. Oats, R. Stoddard Section, Township, Range: 33N, 15E, 33  
 Local relief (hillside, terrace, etc.): slope Local Relief (concave, convex, none): Convex Slope (%): 4  
 Subregion (LRR): D Lat: 40.6819 Long: -120.2894 Datum: NAD83  
 Soil Map Unit Name: Tunnison Very Cobbly Clay, 2 to 9 percent slopes NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W05-6x. No wetland parameters observed. Upland area has large rocks (small boulders), along with cobble rocks throughout soil. Upland plant community exists in the upland area amongst the rocks and no hydrology indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u> = Total Cover		

Sapling/Shrub Stratum (Plot size: <u>15' radius</u> )				
1	Arttri	Artemisia tridentata	10	YES UPL
2				
3				
4				
5				
		<u>10</u> = Total Cover		

Herb Stratum (Plot size: <u>5' radius</u> )				
1	Brotec	Bromus tectorum	15	YES UPL
2	Leytri	Leymus triticoides	30	YES FAC
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>45</u> = Total Cover		

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u> = Total Cover		

%Bare Ground in Herb Stratum: 50 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>30</u>	x 3 =	<u>90</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>25</u>	x 5 =	<u>125</u>
Column Totals: <u>55</u> (A)		<u>215</u> (B)
Prevalence Index = B/A = <u>3.9091</u>		

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Hydrophytic vegetation not observed.



SOIL							Sampling Point:	12-6x
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10 YR 3/3	100					Loam	Rocky (cobbles)
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b>							<b>Hydric Soil Present?</b>	
Type: _____ Shovel refusal/ very rocky							Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Depth (inches): _____ 4								
<b>Remarks:</b> Sample point lacks hydric soil indicators.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> Surface Water (A1)						<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)						<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)						<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )						<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )						<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )						<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)						<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)						<input type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)						<input type="checkbox"/> Other (Explain in Remarks)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____								
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Feature ID: W06-6x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/9/2020  
 Investigator(s): M. Oats, R. Stoddard Section, Township, Range: 32N, 15E, 10  
 Local relief (hillside, terrace, etc.): Basin Floor Local Relief (concave, convex, none): Concave Slope (%): 3  
 Subregion (LRR): D Lat: 40.646 Long: -120.2598 Datum: NAD83  
 Soil Map Unit Name: Loomis-Fivesprings Association, 5 to 30 percent slopes NWI classification: FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No     

Is the Sampled Area within a Wetland? Yes x No     

Remarks: Sample point satisfies all three wetland parameters, soils are problematic and assumed hydric - see soil remarks.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>5' radius</u> )				
1	<u>Typlat Typha latifolia</u>	<u>40</u>	<u>YES</u>	<u>OBL</u>
2	<u>Rumcri Rumex crispus</u>	<u>20</u>	<u>YES</u>	<u>FAC</u>
3	<u>Nasoff Nasturtium officinale</u>	<u>10</u>	<u>NO</u>	<u>OBL</u>
4				
5				
6				
7				
8				
9				
10				
11				
		<u>70</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 30 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>50</u>	x 1 = <u>50</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>20</u>	x 3 = <u>60</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>70</u> (A)	<u>110</u> (B)
Prevalence Index = B/A = <u>1.5714</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Hydrophytic vegetation present in sample area, as indicated by a presence of OBL and FAC species as dominants.

SOIL							Sampling Point: 13-6x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10 YR 2/2	100					Clay loam	Roots throughout
8-16	10 YR 2/1	100					Loamy clay	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input checked="" type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Soil is problematic. Dark soil matrix colors may be obscuring redox features. Soils are assumed hydric due to seasonally ponded soils in a concave position. In addition region lacks redox features and other hydric soil indicators in wetlands.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input checked="" type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input checked="" type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>1</u>						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): <u>0</u>						
(includes capillary fringe)						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Strong hydrology indicators present from surface water, saturation, sediment deposits, and drift deposits.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 14-6x Feature ID: U06-6x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/9/2020  
 Investigator(s): M. Oats, R. Stoddard Section, Township, Range: 32N, 15E, 10  
 Local relief (hillside, terrace, etc.): Basin Floor Local Relief (concave, convex, none): Convex Slope (%): 5  
 Subregion (LRR): D Lat: 40.6458 Long: -120.2595 Datum: NAD83  
 Soil Map Unit Name: Loomis-Fivesprings Association, 5 to 30 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W06-6x, no wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>	= Total Cover	

Herb Stratum (Plot size: <u>5' radius</u> )				
1 <u>Arttri</u>	<u>Artemisia tridentata</u>	<u>25</u>	<u>YES</u>	<u>UPL</u>
2 <u>Psespi</u>	<u>Pseudoroegenria spicata</u>	<u>40</u>	<u>YES</u>	<u>UPL</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>65</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 30 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant  
Species Across All Strata: 2 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>65</u>	x 5 = <u>325</u>
Column Totals: <u>65</u> (A)	<u>325</u> (B)
Prevalence Index = B/A = <u>5</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation  
Present?

Yes      No X

Remarks: No hydrophytic vegetation observed.

<b>SOIL</b>						Sampling Point: 14-6x		
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10 YR/ 2/2	100					Loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.
<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
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<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_ Shovel refusal  
 Depth (inches): \_\_\_\_\_ 6

**Hydric Soil Present?**  
 Yes ☐ No ☒

**Remarks:** No hydric soil indicators observed.

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one required; check all that apply)</b>		<b>Secondary Indicators (2 or more required)</b>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**  
 Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

**Wetland Hydrology Present?**  
 Yes ☐ No ☒

**Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:** No hydrology indicators observed.

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 50-6x Feature ID: W50-6x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/28/2020

Investigator(s): M. Oats, R. Stoddard Section, Township, Range: 32N, 15E, 14  
 Local relief (hillside, terrace, etc.): Slight depression Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 40.6325 Long: -120.2515 Datum: NAD83  
 Soil Map Unit Name: Shinnpeak Very Cobbly Loam, 2 to 15 percent slopes NWI classification: FEW

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: All three wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>	= Total Cover	

Herb Stratum (Plot size: <u>5 ft</u> )				
1	<u>Junens</u>	<u>Juncus ensifolius</u>	<u>70</u>	<u>YES</u> <u>FACW</u>
2	<u>Camqua</u>	<u>Camassia quamash</u>	<u>20</u>	<u>YES</u> <u>FACW</u>
3	<u>Rumcri</u>	<u>Rumex crispus</u>	<u>5</u>	<u>NO</u> <u>FAC</u>
4	<u>Poapra</u>	<u>Poa pratensis</u>	<u>5</u>	<u>NO</u> <u>FAC</u>
5				
6				
7				
8				
9				
10				
11				
			<u>100</u>	= Total Cover

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
			<u>0</u>	= Total Cover

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant  
Species Across All Strata: 2 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	<u>0</u> x 1 = <u>0</u>
FACW species	<u>90</u> x 2 = <u>180</u>
FAC species	<u>10</u> x 3 = <u>30</u>
FACU species	<u>0</u> x 4 = <u>0</u>
UPL species	<u>0</u> x 5 = <u>0</u>
Column Totals:	<u>100</u> (A) <u>210</u> (B)
Prevalence Index = B/A = <u>2.1</u>	

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation  
Present?

Yes X No     

Remarks: Area dominated by FACW vegetation.

SOIL							Sampling Point: 50-6x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10 YR 2/2	98	5 YR 3/4	2	C	M	Loam	Roots throughout
6-12	10 YR 3/1	95	5 YR 3/4	5	C	M	Clay loam	Prominent redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: _____ Rocks _____ Depth (inches): 12						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Hydric soil evidenced by indicator F6 shown by having a layer that is at least 4 inches thick starting within 8 inches of the mineral soil surface and has a matrix value of 3 or less and a chroma of 1 or less with at least 2 percent prominent redox concentrations occurring as soft masses.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> Surface Water (A1)						<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> High Water Table (A2)						<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)						<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )						<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )						<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )						<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)						<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)						<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)						<input type="checkbox"/> Other (Explain in Remarks)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): 0						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 4								
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 0 (includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Primary hydrology evidenced by water table and saturation within 12 inches of the soil surface. In addition area passes FAC-Neutral Test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 51-6x Feature ID: U50-6x  
Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/28/2020  
Investigator(s): M. Oats, R. Stoddard Section, Township, Range: 32N, 15E, 14  
Local relief (hillside, terrace, etc.): Terrace Local Relief (concave, convex, none): Convex Slope (%): 2  
Subregion (LRR): D Lat: 40.6324 Long: -120.2515 Datum: NAD83  
Soil Map Unit Name: Shinnpeak Very Cobbly Loam, 2 to 15 percent slopes NWI classification: FEW  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x  
Hydric Soil Present? Yes      No x  
Wetland Hydrology Present? Yes      No x  
Is the Sampled Area within a Wetland? Yes      No x

Remarks: Upland pair point to W50-6x. No wetland parameters are met.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>5 ft</u> )				
1	<u>Brotec</u> <u>Bromus tectorum</u>	<u>40</u>	<u>YES</u>	<u>UPL</u>
2	<u>Sisalt</u> <u>Sisymbrium altissimum</u>	<u>15</u>	<u>YES</u>	<u>FACU</u>
3	<u>Erocic</u> <u>Erodium cicutarium</u>	<u>10</u>	<u>NO</u>	<u>UPL</u>
4				
5				
6				
7				
8				
9				
10				
11				
		<u>65</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 35 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>15</u>	x 4 =	<u>60</u>
UPL species <u>50</u>	x 5 =	<u>250</u>
Column Totals: <u>65</u> (A)		<u>310</u> (B)
Prevalence Index = B/A = <u>4.7692</u>		

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: No hydrophytic vegetation observed.



<b>SOIL</b>		Sampling Point: 51-6x				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
0-12	10 YR 3/3	100				
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.			<sup>4</sup> Location: PL=Pore Lining, M=Matrix.			
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>				<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histosol (A1)		<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Black Histic (A3)		<input type="checkbox"/> Loamy Mucky Mineral (F1)		<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Hydrogen Sulfide (A4)		<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )		<input type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )		<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)		<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Thick Dark Surface (A12)		<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)		<input type="checkbox"/> Vernal Pools (F9)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)						
<b>Restrictive Layer (if present):</b>			<b>Hydric Soil Present?</b>			
Type: <u>                    Rocks                    </u>			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Depth (inches): <u>                    12                    </u>						
<b>Remarks:</b> No hydric soil indicators observed.						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>			<b>Secondary Indicators (2 or more required)</b>			
Primary Indicators (minimum of one required; check all that apply)						
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>			<b>Wetland Hydrology Present?</b>			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>                    </u>			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>                    </u>						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>                    </u> (includes capillary fringe)						
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> No hydrology indicators observed.						

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 07-6x Feature ID: NW01-6x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/8/2020  
 Investigator(s): M. Oats, R. Stoddard Section, Township, Range: 33N, 15E, 17  
 Local relief (hillside, terrace, etc.): Valley floor Local Relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): D Lat: 40.7307 Long: -120.313 Datum: NAD83  
 Soil Map Unit Name: Indiano-Searles Association, 5 to 30 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x  
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No       
 Is the Sampled Area within a Wetland? Yes      No x

Remarks: Hydrology indicators present due to recent rainfall and may not be normal situation. Sample point lacks hydrophytic vegetation.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator	
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status	
1	_____	_____	_____	_____	
2	_____	_____	_____	_____	
3	_____	_____	_____	_____	
4	_____	_____	_____	_____	
		0	= Total Cover		
Sapling/Shrub Stratum	(Plot size: _____)				
1	_____	_____	_____	_____	
2	_____	_____	_____	_____	
3	_____	_____	_____	_____	
4	_____	_____	_____	_____	
5	_____	_____	_____	_____	
		0	= Total Cover		
Herb Stratum	(Plot size: _____ 5' radius _____)				
1	Poasec	Poa secunda	20	YES	FACU
2	_____	_____	_____	_____	_____
3	_____	_____	_____	_____	_____
4	_____	_____	_____	_____	_____
5	_____	_____	_____	_____	_____
6	_____	_____	_____	_____	_____
7	_____	_____	_____	_____	_____
8	_____	_____	_____	_____	_____
9	_____	_____	_____	_____	_____
10	_____	_____	_____	_____	_____
11	_____	_____	_____	_____	_____
		20	= Total Cover		
Woody Vine Stratum	(Plot size: _____)				
1	_____	_____	_____	_____	
2	_____	_____	_____	_____	
		0	= Total Cover		

%Bare Ground in Herb Stratum: 80 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of: Multiply by:  
 OBL species 0 x 1 = 0  
 FACW species 0 x 2 = 0  
 FAC species 0 x 3 = 0  
 FACU species 20 x 4 = 80  
 UPL species 0 x 5 = 0  
 Column Totals: 20 (A) 80 (B)  
 Prevalence Index = B/A = 4

### Hydrophytic Vegetation Indicators:

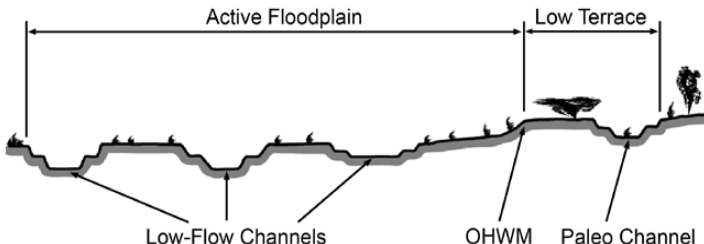
     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: No hydrophytic vegetation observed.

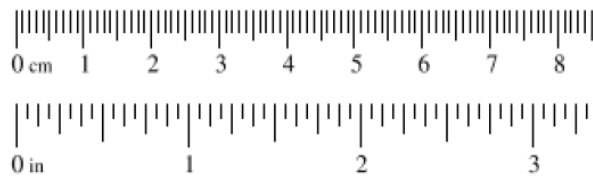
SOIL							Sampling Point: 07-6x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10 YR 3/2	100					Loamy clay	
4-12	10 YR 4/2	58	10 YR 4/6	2	C	M	Clay	
4-12	7.5 YR 3/2	40						
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
						<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: <u>Shovel refusal</u> Depth (inches): <u>12</u>						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Minimal redox features present in lower soil layer, however does satisfy soil matrix indicator.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)								
<input checked="" type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):		<u>0</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Water Table Present?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):		<u>6</u>			
Saturation Present?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):		<u>0</u>			
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicators present from surface water, high water table, and saturation within 12 inches of soil surface.								

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 50-7x		<b>Feature ID:</b> D50-7x		<b>Date:</b> 4/28/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.6179, -120.2457			
<b>Potential anthropogenic influences on the channel system:</b> Adjacent to highway with culvert					
<b>Brief site description:</b> Intermittent stream flowing east, flows into wetland on east side of highway.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <div style="margin-left: 20px;">           a) Record the floodplain unit and GPS position.            b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.            c) Identify any indicators present at the location.         </div> 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHW M and record the indicators. Record the OHW M position via: <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer         </div> <div style="text-align: center;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:         </div> </div>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

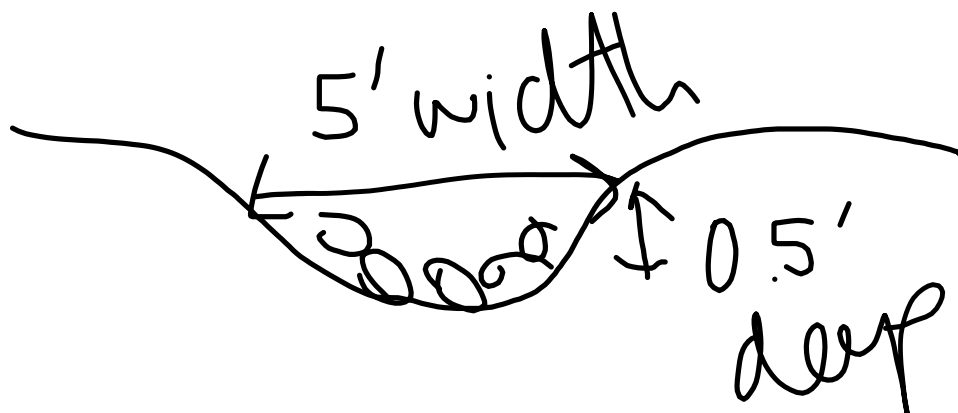


Feature ID: D50-7x

Cross section ID:

Date: 4/28/2020 Time:

Cross section drawing:



OHW

GPS point: \_\_\_\_\_

**Indicators:**



Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

Small boulders are in bed of stream channel, along with moderate break in slope.

Floodplain unit:



Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Early (herbaceous & seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**



Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



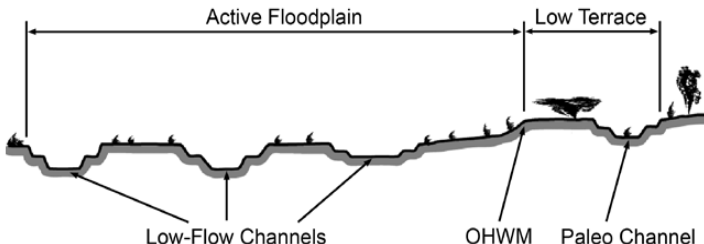
Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> <u>51-7x</u>		<b>Feature ID:</b> <u>D51-7x</u>		<b>Date:</b> <u>4/28/2020</u>	
<b>Project:</b> <u>Zayo fiberoptic</u>					
<b>Location:</b> <u>Lassen County</u>			<b>Photo begin/end file#:</b> <u>See Field Photos</u>		
<b>Investigator(s):</b> <u>M. Oats, B. Cohen</u>					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> <u>Lambert</u> <b>Datum:</b> <u>NAD83</u> <b>Coordinates:</b> <u>40.5992, -120.2471</u>			
<b>Potential anthropogenic influences on the channel system:</b> Adjacent to highway with culvert					
<b>Brief site description:</b> Ephemeral stream flowing west.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer </div> <div style="width: 45%;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other: _____ </div> </div> </li> </ol>					



### Wentworth Size Classes

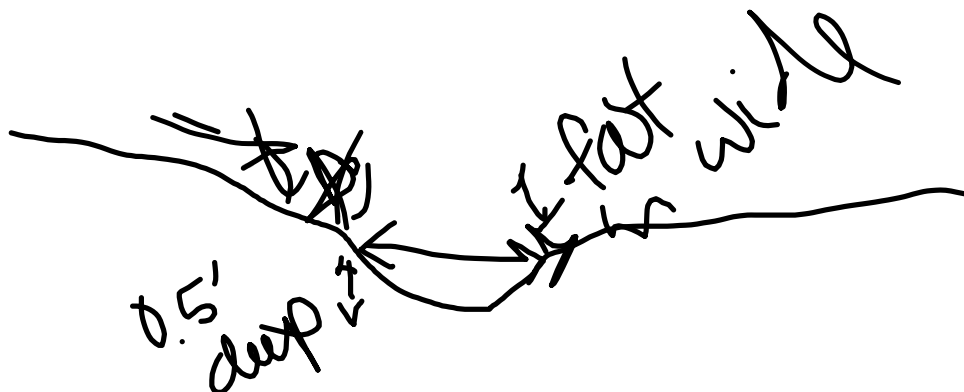
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D51-7x

Cross section ID:

Date: 4/28/2020 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: Drift deposits



Other: \_\_\_\_\_

**Comments:**

Sandy sediment in bed of stream channel with a lack of vegetation, along with moderate break in slope. Great Basin wild rye on banks of stream, along with sagebrush.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 100-7x		<b>Feature ID:</b> D100-7x		<b>Date:</b> 4/13/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> B. Cohen, M. Oats					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site?		<b>Location Details:</b>			
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?					
		<b>Projection:</b> Lambert <b>Datum:</b> NAD83			
		<b>Coordinates:</b> 40.5435, -120.2598			
<b>Potential anthropogenic influences on the channel system:</b> Roadway, culvert					
<b>Brief site description:</b> Intermittent stream with no feature present on opposite side of road, standing water present at time of survey					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> _____		<b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D100-7x

Cross section ID:

Date: 4/13/2020 Time:

Cross section drawing:



OHW

GPS point: \_\_\_\_\_

**Indicators:**



Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

Mostly unvegetated, no aquatic veg due to canal maintenance

Floodplain unit:



Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Early (herbaceous & seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**



Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



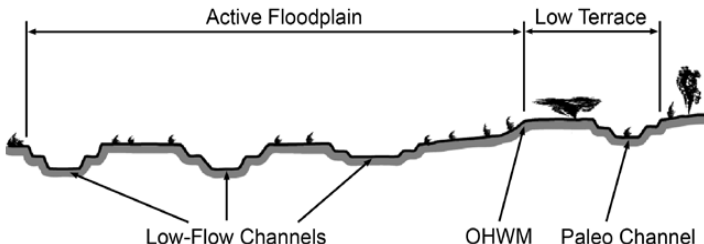
Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA <input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Mid (herbaceous, shrubs, saplings) <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks <input type="checkbox"/> Ripples <input type="checkbox"/> Drift and/or debris <input type="checkbox"/> Presence of bed and bank <input type="checkbox"/> Benches		<input type="checkbox"/> Soil development <input type="checkbox"/> Surface relief <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	
<b>Comments:</b>   			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA <input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Mid (herbaceous, shrubs, saplings) <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks <input type="checkbox"/> Ripples <input type="checkbox"/> Drift and/or debris <input type="checkbox"/> Presence of bed and bank <input type="checkbox"/> Benches		<input type="checkbox"/> Soil development <input type="checkbox"/> Surface relief <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	
<b>Comments:</b>   			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 101-7x		<b>Feature ID:</b> D102-7x		<b>Date:</b> 4/13/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> B. Cohen, M. Oats					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.5405, -120.2606			
<b>Potential anthropogenic influences on the channel system:</b> Highway, culvert					
<b>Brief site description:</b> Ephemeral stream. Uncertain of continuation east. Has small mounds with some vegetation within OHW M.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>   </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D102-7x

Cross section ID:

Date: 4/13/2020 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☒ Other: Root exposure☒ Other: Drift deposits**Comments:****Floodplain unit:**☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA <input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Mid (herbaceous, shrubs, saplings) <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks <input type="checkbox"/> Ripples <input type="checkbox"/> Drift and/or debris <input type="checkbox"/> Presence of bed and bank <input type="checkbox"/> Benches		<input type="checkbox"/> Soil development <input type="checkbox"/> Surface relief <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	
<b>Comments:</b>   			

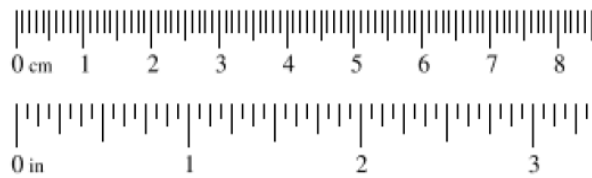
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA <input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Mid (herbaceous, shrubs, saplings) <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks <input type="checkbox"/> Ripples <input type="checkbox"/> Drift and/or debris <input type="checkbox"/> Presence of bed and bank <input type="checkbox"/> Benches		<input type="checkbox"/> Soil development <input type="checkbox"/> Surface relief <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	
<b>Comments:</b>   			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

Sampling Point: 102-7x		Feature ID: D103-7x		Date: 4/13/2020					
Project: Zayo Fiberoptic									
Location: Lassen County			Photo begin/end file#: See Field Photos						
Investigator(s): B. Cohen, M. Oats									
Y	<input checked="" type="checkbox"/>	N	<input type="checkbox"/>	Do normal circumstances exist on the site?					
Y	<input type="checkbox"/>	N	<input checked="" type="checkbox"/>	Is the site significantly disturbed?					
				Location Details:					
				Projection: Lambert Datum: NAD83					
				Coordinates: 40.4105, -120.2881					
Potential anthropogenic influences on the channel system:									
Highway, fences									
Brief site description:									
Ephemeral rocky stream going southeast									
Checklist of resources (if available)									
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data							
Dates: _____		Gage number: _____							
<input checked="" type="checkbox"/> Topographic maps		Period of record: _____							
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges							
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis							
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating							
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event							
<input type="checkbox"/> Existing delineation(s) for site									
<input checked="" type="checkbox"/> Global positioning system (GPS)									
<input type="checkbox"/> Other studies									
<p style="text-align: center;">Hydrogeomorphic Floodplain Units</p>									
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via: <table border="0" style="width: 100%;"> <tr> <td><input type="checkbox"/> Mapping on aerial photograph</td> <td><input checked="" type="checkbox"/> GPS</td> </tr> <tr> <td><input type="checkbox"/> Digitized on computer</td> <td><input type="checkbox"/> Other:</td> </tr> </table> </li> </ol>						<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS	<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:
<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS								
<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:								

### Wentworth Size Classes

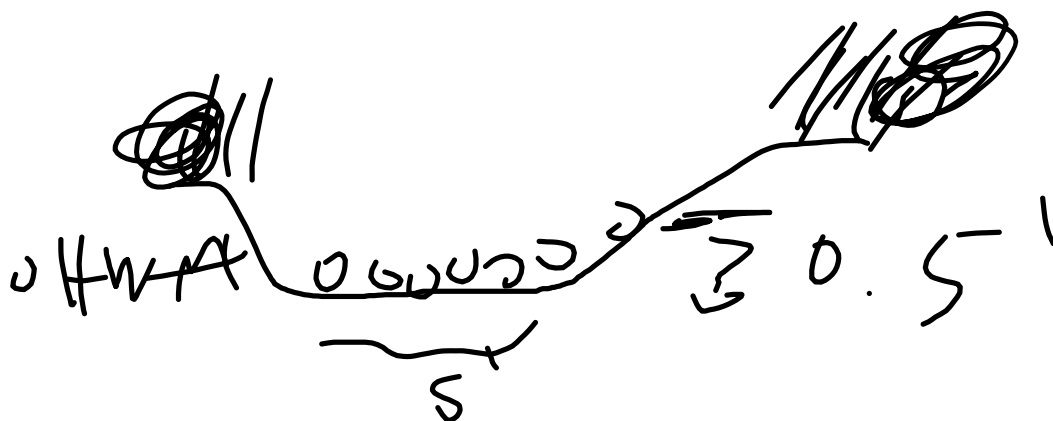
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D103-7x

Cross section ID:

Date: 4/13/2020 Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☒ Other: Root exposure☒ Other: Drift depositsComments:

no water present at time of survey.

Floodplain unit:☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

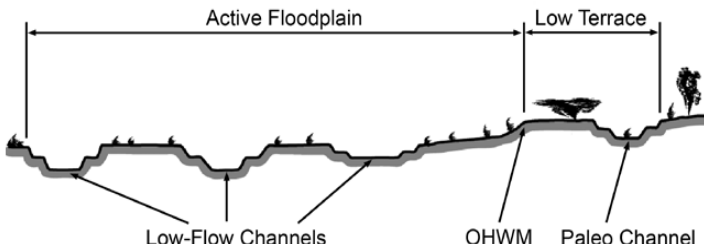
Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 103-7x		<b>Feature ID:</b> D104-7x		<b>Date:</b> 4/14/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> B. Cohen, M. Gould					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.4580, -120.2790			
<b>Potential anthropogenic influences on the channel system:</b> Potentially excavated or man-made feature now functioning as drainage.					
<b>Brief site description:</b> Ephemeral system with upland grasses growing such as elymus hispidus. Bent veg and other indicators show minor flows in response to rain events.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies </div> <div> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </div> </div>					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>   </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via: <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input type="checkbox"/> Mapping on aerial photograph    <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Digitized on computer    <input type="checkbox"/> Other: </div> </li> </ol>					



### Wentworth Size Classes

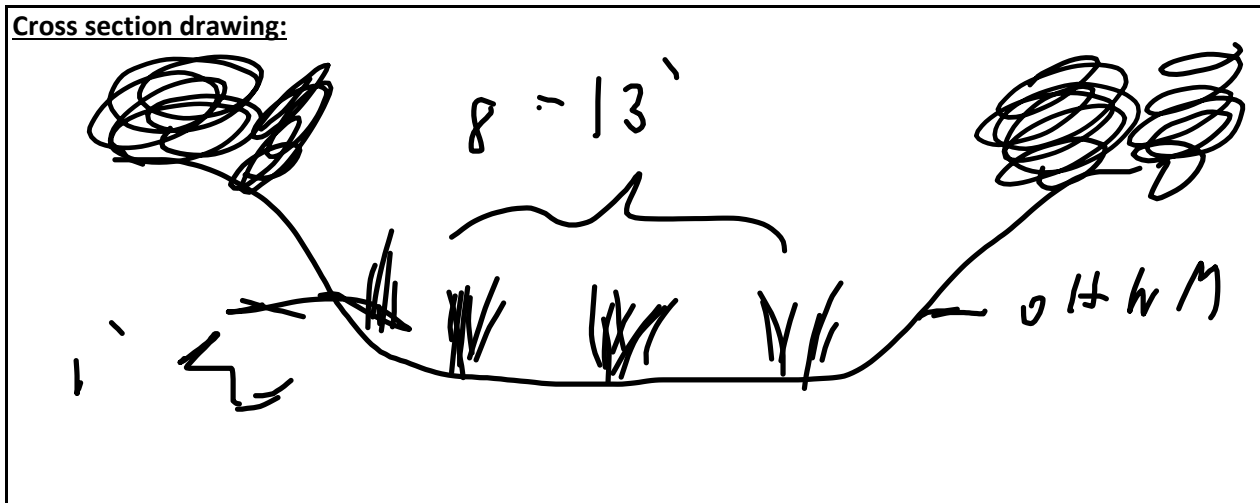
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D104-7x

Cross section ID:

Date: 4/14/2020 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**☒ Change in average sediment texture☒ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

Shows sedimentation, bent veg, and minor changes in veg cover but has upland grasses that likely invaded during dry periods. Has small upland islands within.

**Floodplain unit:**☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)**Indicators:**☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

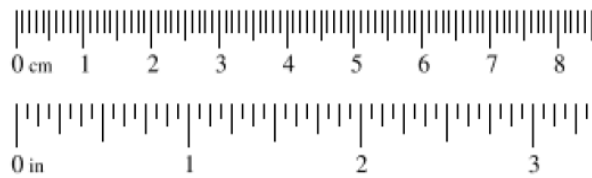
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 2-8x		<b>Feature ID:</b> D1-8x		<b>Date:</b> 4/15/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> B. Cohen, M. Gould					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.3432, -120.4225			
<b>Potential anthropogenic influences on the channel system:</b> Artificial ditch for irrigation gravel substance					
<b>Brief site description:</b> Gravel excavated ditch connecting to D105-8bx (concrete irrigation canal). Does extend south only connect north to irrigation canal. Shows OHW M indicators but excavated.					
<b>Checklist of resources (if available)</b> <input checked="" type="checkbox"/> Aerial photography <input type="checkbox"/> Stream gage data <b>Dates:</b> _____ <b>Gage number:</b> _____ <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Period of record: <input type="checkbox"/> Geologic maps <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Vegetation maps <input type="checkbox"/> Results of flood frequency analysis <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and <input type="checkbox"/> Existing delineation(s) for site the most recent event exceeding a 5-year event <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via: <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other: </div> </div> </li> </ol>					

### Wentworth Size Classes

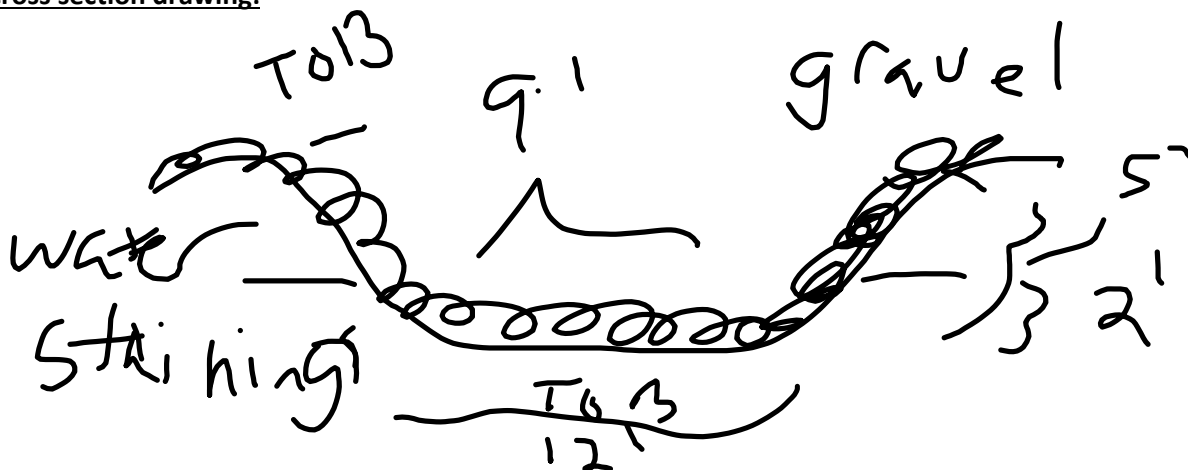
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D1-8x

Cross section ID:

Date: 4/15/2020 Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☒ Other: Water staining☒ Other: Algal mattingComments:

Artificial gravel excavated.

Floodplain unit:☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

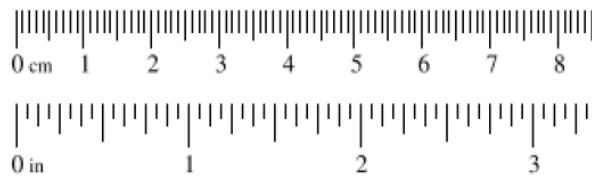
# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 7-8x		<b>Feature ID:</b> D2-8x		<b>Date:</b> 4/15/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> B. Cohen, M. Gould					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.2638, -120.4726			
<b>Potential anthropogenic influences on the channel system:</b> highway, culverts					
<b>Brief site description:</b> Intermittent stream does not continue on east side of highway, flows into wetland.					
<b>Checklist of resources (if available)</b> <input checked="" type="checkbox"/> Aerial photography <input type="checkbox"/> Stream gage data <b>Dates:</b> _____ <b>Gage number:</b> _____ <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Period of record: <input type="checkbox"/> Geologic maps <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Vegetation maps <input type="checkbox"/> Results of flood frequency analysis <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and <input type="checkbox"/> Existing delineation(s) for site the most recent event exceeding a 5-year event <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p> <p style="text-align: center;"><b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b></p> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-around;"> <input type="checkbox"/> Mapping on aerial photograph <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Digitized on computer <input type="checkbox"/> Other: </div> </li> </ol>					



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D2-8x

Cross section ID:

Date: 4/15/2020 Time:

**Cross section drawing:**



**OHW**

GPS point: \_\_\_\_\_

**Indicators:**



Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

water present at time of survey

**Floodplain unit:**



Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Early (herbaceous & seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**



Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 3-8x Feature ID: W5-8x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/15/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 28N, 13E, 14  
 Local relief (hillside, terrace, etc.): Roadside depression Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 40.2877 Long: -120.4806 Datum: NAD83  
 Soil Map Unit Name: Truckee Loam, 0 to 2 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No       
 Is the Sampled Area within a Wetland? Yes x No     

Remarks: Adjacent to irrigated pasture/wetland outside ROW. All three wetland indicators present. Soils are problematic and assumed hydric - see soil remarks.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		0	= Total Cover	
Herb Stratum	(Plot size: 6 ft _____)			
1	Phaar	Phalaris arundinacea	85	YES
2	Junbal	Juncus balticus	35	YES
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		120	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>120</u>	x 2 =	<u>240</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>120</u> (A)		<u>240</u> (B)
Prevalence Index = B/A = <u>2</u>		

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Area dominated by FACW vegetation, passes dominance test for hydrophytic vegetation.

SOIL							Sampling Point:		3-8x
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>									
Depth (inches)	Matrix		Redox Features			Texture	Remarks		
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			Loc <sup>2</sup>	
0-16	10 YR 2/2	100					Loam		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>									
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>			
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )			
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )			
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)			
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)			
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input checked="" type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)						
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)						
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)						
<input type="checkbox"/> Sandy Gleyed Matrix (S4)									
						<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.			
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>			
Type: _____						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Depth (inches): _____									
<b>Remarks:</b> Soil is problematic. Very small gravel or sandy material present. Soil matrix is a dark color and may obscure redox features. Feature is in a concave position with a dominance of hydrophytic vegetation and hydrology and therefore soil is assumed hydric. In addition, many wetlands in region lack hydric soil indicators and soil hydrology is seasonal and influenced by agriculture.									
<b>HYDROLOGY</b>									
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>			
<b>Primary Indicators (minimum of one required; check all that apply)</b>									
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input checked="" type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____							
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____							
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (includes capillary fringe)		Depth (inches): _____		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>									
<b>Remarks:</b> Hydrology likely influenced by agriculture by adjacent irrigated field/wetland. Bent over vegetation in uniform direction shows drainage patterns and area passes FAC-Neutral Test.									

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 4-8x Feature ID: U5-8x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/15/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 28N, 13E, 14  
 Local relief (hillside, terrace, etc.): Road slope Local Relief (concave, convex, none): Convex Slope (%): 5  
 Subregion (LRR): D Lat: 40.2876 Long: -120.4806 Datum: NAD83  
 Soil Map Unit Name: Truckee Loam, 0 to 2 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W5-8x, no wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)				
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)				
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		0	= Total Cover	
Herb Stratum (Plot size: 6 ft _____)				
1	Alysim Alyssum simplex	35	YES	UPL
2	Brotec Bromus tectorum	7	NO	UPL
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		42	= Total Cover	
Woody Vine Stratum (Plot size: _____)				
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 58 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant  
Species Across All Strata: 1 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>42</u>	x 5 = <u>210</u>
Column Totals: <u>42</u> (A)	<u>210</u> (B)
Prevalence Index = B/A = <u>5</u>	

### Hydrophytic Vegetation Indicators:

- No 1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation  
Present?

Yes      No X

Remarks: No hydrophytic vegetation observed.

SOIL							Sampling Point:		4-8x	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Matrix		Redox Features				Texture	Remarks		
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>				

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Histosol (A1)Sandy Redox (S5)  
Histic Epipedon (A2)Stripped Matrix (S6)  
Black Histic (A3)Loamy Mucky Mineral (F1)  
Hydrogen Sulfide (A4)Loamy Gleyed Matrix (F2)  
Stratified Layers (A5) (LRR C)Depleted Matrix (F3)  
1 cm Muck (A9) (LRR D)Redox Dark Surface (F6)  
Depleted Below Dark Surface (A11)Depleted Dark Surface (F7)  
Thick Dark Surface (A12)Redox Depressions (F8)  
Sandy Mucky Mineral (S1)Vernal Pools (F9)  
Sandy Gleyed Matrix (S4)

Indicators for Problematic Hydric Soils<sup>3</sup>:  
☐ 1 cm Muck (A9) (LRR C)  
☐ 2 cm Muck (A10) (LRR B)  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (TF2)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):  
Type: road base  
Depth (inches): 0

Hydric Soil Present?  
Yes☐ No☒

Remarks: Unable to dig soil pit in compacted road slope. Gravelly

HYDROLOGY

Wetland Hydrology Indicators:  
Primary Indicators (minimum of one required; check all that apply)

Surface Water (A1)Salt Crust (B11)  
High Water Table (A2)Biotic Crust (B12)  
Saturation (A3)Aquatic Invertebrates (B13)  
Water Marks (B1) (Nonriverine)Hydrogen Sulfide Odor (C1)  
Sediment Deposits (B2) (Nonriverine)Oxidized Rhizospheres along Living Roots (C3)  
Drift Deposits (B3) (Nonriverine)Presence of Reduced Iron (C4)  
Surface Soil Cracks (B6)Recent Iron Reduction in Tilled Soils (C6)  
Inundation Visible on Aerial Imagery (B7)Thin Muck Surface (C7)  
Water-Stained Leaves (B9)Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Water Marks (B1) (Riverine)  
☐ Sediment Deposits (B2) (Riverine)  
☐ Drift Deposits (B3) (Riverine)  
☐ Drainage Patterns (B10)  
☐ Dry-Season Water Table (C2)  
☐ Crayfish Burrows (C8)  
☐ Saturation Visible on Aerial Imagery (C9)  
☐ Shallow Aquitard (D3)  
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes☐ No☒ Depth (inches):  
Water Table Present? Yes☐ No☒ Depth (inches):  
Saturation Present? Yes☐ No☒ Depth (inches):  
(includes capillary fringe)

Wetland Hydrology Present?  
Yes☐ No☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No hydrology indicators observed.

# **WETLAND DETERMINATION DATA FORM -Arid West Region**

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 5-8x Feature ID: W6-8x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/15/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 28N, 13E, 23  
 Local relief (hillside, terrace, etc.): Roadside depression Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 40.2738 Long: -120.4821 Datum: NAD83  
 Soil Map Unit Name: Mottsville Loamy Coarse Sand, 2 to 9 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
 Are Vegetation No, Soil No, or Hydrology Yes naturally problematic?      (If needed, explain any answers in Remarks.)

## **SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No     

Is the Sampled Area within a Wetland? Yes x No     

**Remarks:** Riparian wetland likely in relict channel where hydrology has changed, hydrology is problematic - see hydrology remarks.

## **VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER**

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft</u> )				
1 <u>Salexi</u>	<u>Salix exigua</u>	<u>80</u>	<u>YES</u>	<u>FACW</u>
2				
3				
4				
5				
		<u>80</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Herb Stratum</b> (Plot size: <u>6 ft</u> )				
1 <u>Poapal</u>	<u>Poa palustris</u>	<u>60</u>	<u>YES</u>	<u>FAC</u>
2 <u>Junbal</u>	<u>Juncus balticus</u>	<u>30</u>	<u>YES</u>	<u>FACW</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>90</u>		= Total Cover

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Woody Vine Stratum</b> (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 10 % Cover of Biotic Crust:     

### **Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### **Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>110</u>	x 2 =	<u>220</u>
FAC species <u>60</u>	x 3 =	<u>180</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>170</u> (A)		<u>400</u> (B)
Prevalence Index = B/A = <u>2.3529</u>		

### **Hydrophytic Vegetation Indicators:**

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes X No     

**Remarks:** Area dominated by hydrophytic vegetation.



SOIL							Sampling Point:	5-8x
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10 YR 2/1	100					Loamy sand	
5-7	10 YR 4/3	75	2.5 YR 3/6	25	C	M	Sand	Prominent Redox
7-16	10 YR 2/1	80	2.5 YR 3/6	20	C	M	Loamy sand	Prominent Redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input checked="" type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>					
<input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )					
<input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )					
<input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)					
<input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Depleted Dark Surface (F7)								
<input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Redox Depressions (F8)								
<input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Vernal Pools (F9)								
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Although the target layer begins at 7 inches from the soil surface the first 5 inches of the soil surface have a matrix value and chroma that meet the requirements for indicator S5 and when combined with the layer from 7-16 inches the thickness requirements and matrix chroma of 2 or less with at least 2 percent prominent redox concentrations. Therefore when viewed in its entirety indicator S5 is met and soil is hydric.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Other (Explain in Remarks)						<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )						<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)						<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)						<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)								
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Depth (inches): _____			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Water Table Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Depth (inches): _____					
Saturation Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Depth (inches): _____					
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology is problematic. Dominance of hydrophytic vegetation and hydric soils in concave area present. Hydrology has likely been manipulated or cutoff. Evidence of past stream likely due to culvert, landform through agricultural features, and hydrology on other side of road. Current hydrology may be seasonal and potential human influenced through agricultural releases.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 6-8x Feature ID: U6-8x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/15/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 28N, 13E, 23  
 Local relief (hillside, terrace, etc.): Valley desert Local Relief (concave, convex, none): Concave Slope (%): 30  
 Subregion (LRR): D Lat: 40.2738 Long: -120.4821 Datum: NAD83  
 Soil Map Unit Name: Mottsville Loamy Coarse Sand, 2 to 9 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W6-8x, no wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1 Arttri	Artemisia tridentata	65	YES	UPL
2				
3				
4				
5				
		<u>65</u>		= Total Cover

Herb Stratum (Plot size: <u>6 ft</u> )				
1 Poapal	Poa palustris	40	YES	FAC
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>40</u>		= Total Cover

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 60 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>40</u>	x 3 = <u>120</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>65</u>	x 5 = <u>325</u>
Column Totals: <u>105</u> (A)	<u>445</u> (B)
Prevalence Index = B/A = <u>4.2381</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Area not dominated by hydrophytic vegetation.

[illegible]

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 8-8x Feature ID: W8-8x  
Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/15/2020  
Investigator(s): B. Cohen, M. Gould Section, Township, Range: 28N, 13E, 25  
Local relief (hillside, terrace, etc.): Swale Local Relief (concave, convex, none): Concave Slope (%): 3  
Subregion (LRR): D Lat: 40.2635 Long: -120.4722 Datum: NAD83  
Soil Map Unit Name: Mottsville Loamy Coarse Sand, 2 to 9 percent slopes NWI classification: Fresh FO/Shrub wetland  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
Are Vegetation No, Soil Yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
Hydric Soil Present? Yes x No       
Wetland Hydrology Present? Yes x No       
Is the Sampled Area within a Wetland? Yes x No     

Remarks: PSS/PFO. Adjacent to stream but may be relict channel as well. Soil is problematic and assumed hydric - see soil remarks.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30 ft</u> )				
1 <u>Poptre</u>	<u>Populus tremuloides</u>	<u>35</u>	<u>YES</u>	<u>FACU</u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>35</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1 <u>Salexi</u>	<u>Salix exigua</u>	<u>40</u>	<u>YES</u>	<u>FACW</u>
2 <u>Roscal</u>	<u>Rosa californica</u>	<u>45</u>	<u>YES</u>	<u>FAC</u>
3 <u>Ribaur</u>	<u>Ribes aureum</u>	<u>15</u>	<u>NO</u>	<u>FAC</u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
5 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>100</u>	= Total Cover	

Herb Stratum (Plot size: <u>6ft</u> )				
1 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
5 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
6 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
7 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
8 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
9 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
10 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
11 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>    </u> )				
1 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 100 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)  
Total Number of Dominant Species Across All Strata: 3 (B)  
Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>40</u>	x 2 = <u>80</u>
FAC species <u>60</u>	x 3 = <u>180</u>
FACU species <u>35</u>	x 4 = <u>140</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>135</u> (A)	<u>400</u> (B)
Prevalence Index = B/A = <u>2.963</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Area dominated by hydrophytic vegetation.

SOIL							Sampling Point:		8-8x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>										
Depth (inches)	Matrix		Redox Features				Texture	Remarks		
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>				
0-12	10 YR 3/1	100					Loamy sand			
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.				
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>										
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>					
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )					
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)		<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )					
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Reduced Vertic (F18)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Red Parent Material (TF2)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)		<input type="checkbox"/> Other (Explain in Remarks)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)										
<b>Restrictive Layer (if present):</b>					<b>Hydric Soil Present?</b>					
Type:	rock				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Depth (inches):	12									
<b>Remarks:</b> Soil is problematic. Soil has a dark matrix color which may obscure redox features. Area is dominated by hydrophytic vegetation and has hydrology present in a concave position, therefore soil is assumed hydric. In addition, region lacks redox features in wetlands. Feature likely has seasonally ponded soils and has sandy materials near a stream feature.										
<b>HYDROLOGY</b>										
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>					
Primary Indicators (minimum of one required; check all that apply)										
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )					
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )					
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)		<input checked="" type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )					
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)					
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)					
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)					
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)					
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)					
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>					
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Depth (inches): _____		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Depth (inches): _____							
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (includes capillary fringe)			Depth (inches): _____							
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>										
<b>Remarks:</b> Bent vegetation within swale / depression and bent over on branches indicates drainage patterns and area passes FAC-Neutral Test.										

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 9-8x Feature ID: U8-8x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/15/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 28N, 13E, 25  
 Local relief (hillside, terrace, etc.): Road slope Local Relief (concave, convex, none): Convex Slope (%): 55  
 Subregion (LRR): D Lat: 40.2635 Long: -120.4722 Datum: NAD83  
 Soil Map Unit Name: Mottsville Loamy Coarse Sand, 2 to 9 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W8-8x, upland point in road slope and lacks hydric soil indicators and two secondary hydrology indicators.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1 <u>Salexi</u>	<u>Salix exigua</u>	<u>25</u>	<u>YES</u>	<u>FACW</u>
2				
3				
4				
5				
		<u>25</u>	= Total Cover	

Herb Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>0</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 100 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>25</u>	x 2 =	<u>50</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>25</u> (A)		<u>50</u> (B)
Prevalence Index = B/A = <u>2</u>		

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Area has no herbaceous vegetation but has willows (FACW) in shrub layer still. Passes dominance test for hydrophytic vegetation.

[illegible]

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 1-8x Feature ID: NW1-8x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/14/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 29N, 14E, 16  
 Local relief (hillside, terrace, etc.): Valley floor Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 40.3653 Long: -120.4161 Datum: NAD83  
 Soil Map Unit Name: Honlak Loam, 0 to 2 percent slopes NWI classification: riparian wetland  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Nearby stream is relict and no longer present. Area confirmed as upland, lacks hydric soil and hydrology indicators.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>15ft</u> )				
1 <u>Salexi</u>	<u>Salix exigua</u>	<u>65</u>	<u>YES</u>	<u>FACW</u>
2				
3				
4				
5				
		<u>65</u>	= Total Cover	

Herb Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>0</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 100 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>65</u>	x 2 =	<u>130</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>65</u> (A)		<u>130</u> (B)
Prevalence Index = B/A = <u>2</u>		

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Area dominated by FACW willows.



<b>SOIL</b>		Sampling Point: 1-8x				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
0-16	10 YR 4/2	100			Loamy sand	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.			<sup>4</sup> Location: PL=Pore Lining, M=Matrix.			
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
				<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<b>Restrictive Layer (if present):</b>				<b>Hydric Soil Present?</b>		
Type: _____ Depth (inches): _____				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> No hydric soil indicators observed.						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)						
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>				<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____				
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____ (includes capillary fringe)				
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> Only one secondary hydrology indicator present (FAC-Neutral Test), not enough to satisfy hydrology criteria.						

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 50-8x Feature ID: NW50-8x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/28/2020  
 Investigator(s): M. Oats, B. Cohen Section, Township, Range: 29N, 14E, 16  
 Local relief (hillside, terrace, etc.): Slight depression Local Relief (concave, convex, none): Concave Slope (%): 3  
 Subregion (LRR): D Lat: 40.3683 Long: -120.402 Datum: NAD83  
 Soil Map Unit Name: Humboldt Silty Clay, 0 to 1 percent slopes, Occasionally Flooded NWI classification: FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Relic hydric soil may be present,. Area is dominated by hydrophytic vegetation but does not show hydrology.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1	_____	75	_____	_____
2	_____	20	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		95	= Total Cover	
Herb Stratum	(Plot size: 6 ft _____)			
1	Leplat <i>Lepidium latifolium</i>	80	YES	FAC
2	Conmac <i>Conium maculatum</i>	10	NO	FACW
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		90	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 10 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>10</u>	x 2 = <u>20</u>
FAC species <u>80</u>	x 3 = <u>240</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>90</u> (A)	<u>260</u> (B)
Prevalence Index = B/A = <u>2.8889</u>	

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

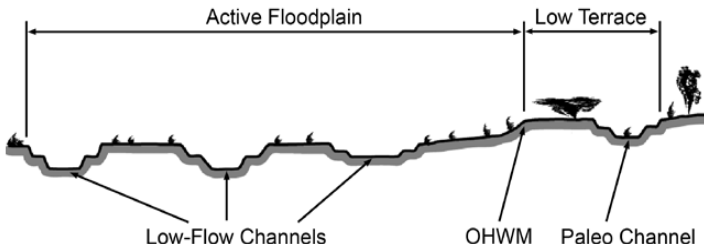
Hydrophytic  
Vegetation  
Present?

Yes X No     

Remarks: Hydrophytic vegetation is dominant in sample point.

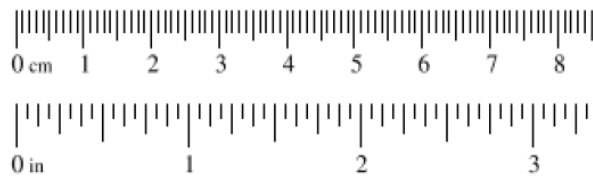
SOIL							Sampling Point: 50-8x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10 YR 3/1	100		2	C	M	Loam	
8-16	10 YR 2/1	90	5 YR 4/6	10	C	M	Clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: _____ None								
Depth (inches): _____ N/A						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Hydric soil met for indicator F6. 4 inch thickness within 12 inches of the soil surface with more than 2 percent redox concentrations.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____ N/A						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____ N/A						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____ N/A				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators were observed.								

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 3-9x		<b>Feature ID:</b> D1-9x		<b>Date:</b> 4/16/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> B. Cohen, M. Gould					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.2218, -120.4335			
<b>Potential anthropogenic influences on the channel system:</b> Culvert, nearby highway					
<b>Brief site description:</b> Ephemeral stream flowing west under road some boulders and gravel.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D1-9x

Cross section ID:

Date: 4/16/2020 Time:

Cross section drawing:



**OHWM**

GPS point: \_\_\_\_\_

Indicators:



Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

Comments:

Minor change in species type, two young willows in channel.

**Floodplain unit:**



Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous & seedlings)



Late (herbaceous, shrubs, mature trees)

Indicators:



Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

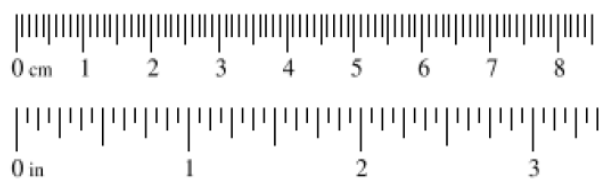
# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 4-9x		<b>Feature ID:</b> D02-9x		<b>Date:</b> 4/16/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> B. Cohen, M. Gould					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>		Do normal circumstances exist on the site?		<b>Location Details:</b>	
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>		Is the site significantly disturbed?			
				<b>Projection:</b> Lambert <b>Datum:</b> NAD83	
				<b>Coordinates:</b> 40.1935, -120.4021	
<b>Potential anthropogenic influences on the channel system:</b> Bridge, fences, highway					
<b>Brief site description:</b> Ephemeral stream flowing east under road. On other side of hwy becomes wetland.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> _____		<b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and			
<input type="checkbox"/> Existing delineation(s) for site		the most recent event exceeding a 5-year event			
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D02-9x

Cross section ID:

Date: 4/16/2020 Time:

Cross section drawing:



**OHW**

GPS point: \_\_\_\_\_

Indicators:



Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

Comments:

**Floodplain unit:**



Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Early (herbaceous & seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

Indicators:



Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



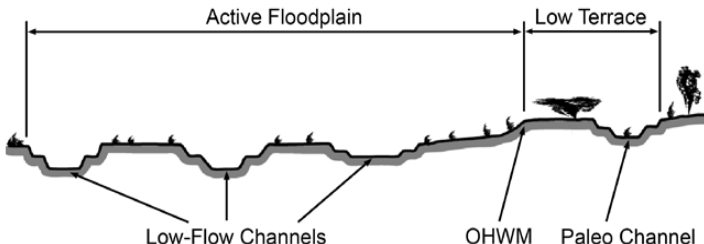
Other: \_\_\_\_\_

Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA <input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Mid (herbaceous, shrubs, saplings) <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks <input type="checkbox"/> Ripples <input type="checkbox"/> Drift and/or debris <input type="checkbox"/> Presence of bed and bank <input type="checkbox"/> Benches		<input type="checkbox"/> Soil development <input type="checkbox"/> Surface relief <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	
<b>Comments:</b>   			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA <input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Mid (herbaceous, shrubs, saplings) <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks <input type="checkbox"/> Ripples <input type="checkbox"/> Drift and/or debris <input type="checkbox"/> Presence of bed and bank <input type="checkbox"/> Benches		<input type="checkbox"/> Soil development <input type="checkbox"/> Surface relief <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	
<b>Comments:</b>   			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 5-9x		<b>Feature ID:</b> D03-9x		<b>Date:</b> 4/16/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> B. Cohen, M. Gould					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.1761, -120.3798			
<b>Potential anthropogenic influences on the channel system:</b> Highway, fences, culvert					
<b>Brief site description:</b> Intermittent stream flowing east under highway.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D03-9x

Cross section ID:

Date: 4/16/2020 Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

Comments:

TOB same as a OHWM.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

Indicators:

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 100-9x Feature ID: W100-9x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 4/29/2020  
 Investigator(s): M. Oats, B. Cohen Section, Township, Range: 27N, 14E, 08  
 Local relief (hillside, terrace, etc.): Roadside depression Local Relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): D Lat: 40.2074 Long: -120.4174 Datum: NAD 83  
 Soil Map Unit Name: Bonta Coarse Sandy Loam, 9 to 15 percent slopes NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: Seasonal wetland with all three wetland parameters met.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>15' radius</u> )				
1 <u>Salexi</u>	<u>Salix exigua</u>	<u>40</u>	<u>YES</u>	<u>FACW</u>
2				
3				
4				
5				
		<u>40</u>	= Total Cover	

Herb Stratum (Plot size: <u>5' radius</u> )				
1 <u>Schacu</u>	<u>Schoenoplectus acutus</u>	<u>30</u>	<u>YES</u>	<u>OBL</u>
2 <u>Junbal</u>	<u>Juncus balticus</u>	<u>40</u>	<u>YES</u>	<u>FACW</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>70</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 30 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>30</u>	x 1 = <u>30</u>
FACW species <u>80</u>	x 2 = <u>160</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>110</u> (A)	<u>190</u> (B)
Prevalence Index = B/A = <u>1.7273</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Hydrophytic vegetation observed as indicated by a dominance of OBL and FACW vegetation.



SOIL		Sampling Point: 100-9x						
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features			Texture	Remarks	
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			Loc <sup>2</sup>
0-6	10 YR 3/1	60	7.5 YR 3/4	5	C	M	Loamy sand	Prominent Redox
	10YR 4/2	35						
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.					<sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>				
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )				
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )				
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Reduced Vertic (F18)				
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Red Parent Material (TF2)				
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )	<input checked="" type="checkbox"/>		<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b>			<b>Hydric Soil Present?</b>					
Type: <u>Roadbase</u>			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Depth (inches): <u>6</u>								
<b>Remarks:</b> Hydric soil evidenced by indicator F6 by having a layer that is at least 4 inches thick starting within 8 inches of the mineral soil surface with a matrix value of 3 or less and a chroma of 1 or less with at least 2 percent prominent redox concentrations occurring as soft masses.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>			<b>Secondary Indicators (2 or more required)</b>					
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )				
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )				
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)	<input checked="" type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )				
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)				
<input checked="" type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)				
<b>Field Observations:</b>			<b>Wetland Hydrology Present?</b>					
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Depth (inches): <u>0</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Depth (inches): <u>0</u>					
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Depth (inches): <u>0</u>					
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicators present as indicated by drift deposits (leaves and debris on rocks), as well as noticeable drainage patterns and the vegetation passes the FAC-Neutral test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 101-9x Feature ID: U100-9x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 4/29/2020

Investigator(s): M. Oats, B. Cohen Section, Township, Range: 27N, 14E, 08  
 Local relief (hillside, terrace, etc.): Roadslope Local Relief (concave, convex, none): Convex Slope (%): 4

Subregion (LRR): D Lat: 40.2074 Long: -120.4174 Datum: NAD 83  
 Soil Map Unit Name: Bonta Coarse Sandy Loam, 9 to 15 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic? No (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W100-9x. Sample point on edge of wetland boundary between wetland and road with no wetland parameters met.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>	= Total Cover	

Herb Stratum (Plot size: <u>5' radius</u> )				
1	<u>Brotec</u>	<u>Bromus tectorum</u>	<u>20</u>	<u>YES</u>
2	<u>Censol</u>	<u>Centaurea solstitialis</u>	<u>10</u>	<u>YES</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>30</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 70 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	<u>0</u> x 1 =	<u>0</u>
FACW species	<u>0</u> x 2 =	<u>0</u>
FAC species	<u>0</u> x 3 =	<u>0</u>
FACU species	<u>0</u> x 4 =	<u>0</u>
UPL species	<u>30</u> x 5 =	<u>150</u>
Column Totals:	<u>30</u> (A)	<u>150</u> (B)
Prevalence Index = B/A =		<u>5</u>

### Hydrophytic Vegetation Indicators:

- No 1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: No dominance of hydrophytic vegetation observed.

SOIL							Sampling Point: 101-9x	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 3/4	100					Silty clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)					
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)					
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)						<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____					<b>Hydric Soil Present?</b>  Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
<b>Remarks:</b> No hydric soil indicators observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>			
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>			
Surface Water Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Water Table Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____					
Saturation Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____ (includes capillary fringe)					
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 1-9x Feature ID: NW1-9x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/16/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 28N, 14E, 31  
 Local relief (hillside, terrace, etc.): Floodplain Local Relief (concave, convex, none): Concave Slope (%): 4  
 Subregion (LRR): D Lat: 40.2348 Long: -120.4472 Datum: NAD83  
 Soil Map Unit Name: Plinco Loam, 2 to 9 percent slopes NWI classification: riparian wetland  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Suspect riparian area near drainage, dominant hydrophytic vegetation but lacks hydric soil indicators and hydrology. Area confirmed as upland.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: 30 ft )	% Cover	Species?	Status
1 Popbal	Populus balsamifera	75	YES	FAC
2				
3				
4				
		75	= Total Cover	
Sapling/Shrub Stratum	(Plot size: 15 ft )			
1 Roscal	Rosa californica	70	YES	FAC
2				
3				
4		12		
5				
		82	= Total Cover	
Herb Stratum	(Plot size: 6 ft )			
1 Poapra	Poa pratensis	30	YES	FAC
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		30	= Total Cover	
Woody Vine Stratum	(Plot size: )			
1				
2				
		0	= Total Cover	

%Bare Ground in Herb Stratum: 60 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>175</u>	x 3 = <u>525</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>175</u> (A)	<u>525</u> (B)
Prevalence Index = B/A = <u>3</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>

     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

     5 - Wetland Non-Vascular Plants<sup>1</sup>

     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Area dominated by FAC vegetation.

SOIL							Sampling Point: 1-9x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 3/2	100					Sandy loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
						<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<b>Restrictive Layer (if present):</b>					<b>Hydric Soil Present?</b>			
Type: _____					Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Depth (inches): _____								
<b>Remarks:</b> no hydric soil indicators observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>			
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>			
Surface Water Present?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Water Table Present?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____				
Saturation Present?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____				
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> no hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 2-9x Feature ID: NW2-9x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/16/2020

Investigator(s): B. Cohen, M. Gould Section, Township, Range: 27N, 14E, 06  
 Local relief (hillside, terrace, etc.): Roadside depression Local Relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR): D Lat: 40.2338 Long: -120.4459 Datum: NAD83  
 Soil Map Unit Name: Mottsville Loamy Coarse Sand, 2 to 9 percent slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No     

Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes      No x  
 Wetland Hydrology Present? Yes      No x

Is the Sampled Area within a Wetland? Yes      No x

Remarks: Suspect depression on roadside, dominant hydrophytic vegetation but lacks two secondary hydrology indicators and hydric soil indicators.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1 Roscal	Rosa californica	35	YES	FAC
2 Salexi	Salix exigua	85	YES	FACW
3				
4				
5				
		<u>120</u>		= Total Cover

Herb Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>0</u>		= Total Cover

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 100 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>85</u>	x 2 = <u>170</u>
FAC species <u>35</u>	x 3 = <u>105</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>120</u> (A)	<u>275</u> (B)
Prevalence Index = B/A = <u>2.2917</u>	

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

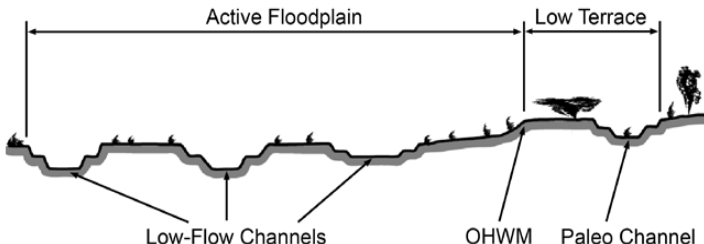
Hydrophytic Vegetation Present?

Yes X No     

Remarks: Area dominated by hydrophytic vegetation.

SOIL							Sampling Point:	2-9x
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-13	10 YR 3/3	100					Sandy loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: _____ rock								
Depth (inches): _____ 13						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> No hydric soil indicators observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Area passes FAC-Neutral Test but lacks another hydrology indicator therefore does not meet requirements for hydrology.								

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 5-10x		<b>Feature ID:</b> D01-10x		<b>Date:</b> 4/17/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> B. Cohen, M. Gould					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.1671, -120.3572			
<b>Potential anthropogenic influences on the channel system:</b> Evidence of human disturbance, culverts, fences, highway					
<b>Brief site description:</b> Ephemeral stream flowing east, on opposite (east) side of highway feature lacks OHW M indicators and shows vegetation in slight depression.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </div> </div>					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>   </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer </div> <div style="width: 45%;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other: </div> </div> </li> </ol>					



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D01-10x

Cross section ID:

Date: 4/17/2020 Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

No water present at time of survey.

Floodplain unit:☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)Indicators:☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA <input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Mid (herbaceous, shrubs, saplings) <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks <input type="checkbox"/> Ripples <input type="checkbox"/> Drift and/or debris <input type="checkbox"/> Presence of bed and bank <input type="checkbox"/> Benches		<input type="checkbox"/> Soil development <input type="checkbox"/> Surface relief <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	
<b>Comments:</b>   			

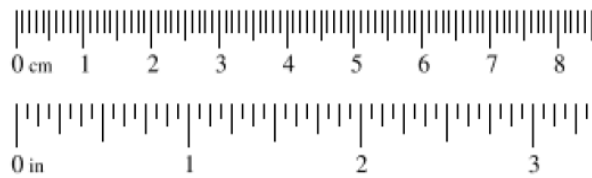
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA <input type="checkbox"/> Early (herbaceous & seedlings)		<input type="checkbox"/> Mid (herbaceous, shrubs, saplings) <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)	
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks <input type="checkbox"/> Ripples <input type="checkbox"/> Drift and/or debris <input type="checkbox"/> Presence of bed and bank <input type="checkbox"/> Benches		<input type="checkbox"/> Soil development <input type="checkbox"/> Surface relief <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	
<b>Comments:</b>   			

# Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 9-10x		<b>Feature ID:</b> D2-10x		<b>Date:</b> 4/20/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> B. Cohen, R. Stoddard					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.1643, -120.3467			
<b>Potential anthropogenic influences on the channel system:</b> Highway, culvert					
<b>Brief site description:</b> Ephemeral stream flowing east, however feature lacks OHWM indicators on east side of road.					
<b>Checklist of resources (if available)</b>					
<input type="checkbox"/> Aerial photography <b>Dates:</b> _____		<input type="checkbox"/> Stream gage data <b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies		Period of record: _____ <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<b>Hydrogeomorphic Floodplain Units</b>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

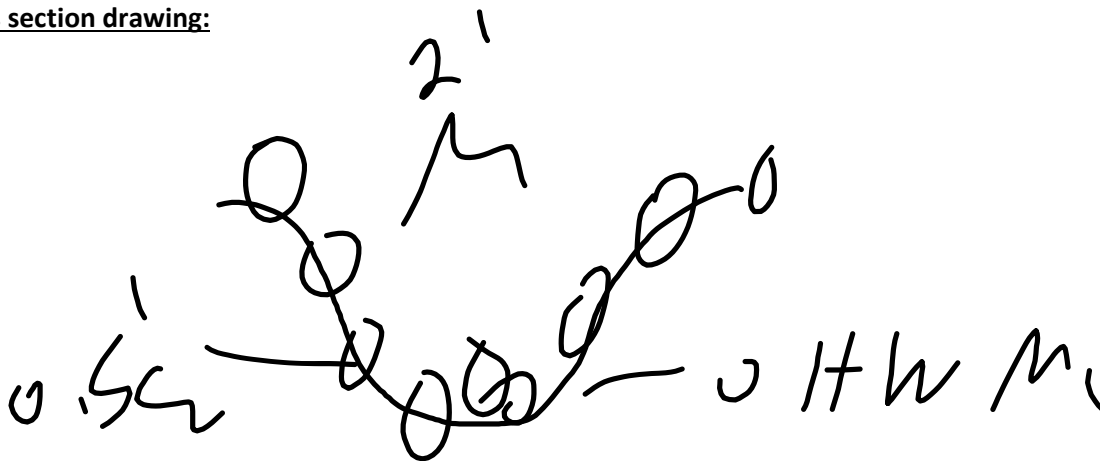
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D2-10x

Cross section ID:

Date: 4/20/2020 Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

Indicators:

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

Comments:

Flashy, ephemeral indicators. No water present at time of survey.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

Indicators:

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 17-10x		<b>Feature ID:</b> D3-10x		<b>Date:</b> 4/22/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> B. Cohen, R. Stoddard					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/>	Do normal circumstances exist on the site?		<b>Location Details:</b>		
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/>	Is the site significantly disturbed?				
			<b>Projection:</b> Lambert <b>Datum:</b> NAD83		
			<b>Coordinates:</b> 40.0285, -120.1075		
<b>Potential anthropogenic influences on the channel system:</b> Highway, culvert					
<b>Brief site description:</b> Ephemeral stream flowing parallel to highway, may connect to drainage D101 to the north or was relict part of that feature at one time but is now ephemeral and broken off.					
<b>Checklist of resources (if available)</b>					
<input type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> _____		<b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and			
<input type="checkbox"/> Existing delineation(s) for site		the most recent event exceeding a 5-year event			
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW and record the indicators. Record the OHW position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			



### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D3-10x

Cross section ID:

Date: 4/22/2020 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

no water present at time of survey. Small berm between this drainage and perennial drainage to the north.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 21-10x		<b>Feature ID:</b> D4-10x		<b>Date:</b> 4/23/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> B. Cohen, R. Stoddard					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b> <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.0041, -120.0887			
<b>Potential anthropogenic influences on the channel system:</b> Highway, culvert					
<b>Brief site description:</b> Ephemeral stream with no water present at time of survey but likely has water some parts of year from agricultural artificial inputs and runoff.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>  </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via:             <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D4-10x

Cross section ID:

Date: 4/23/2020 Time:

Cross section drawing:



OHWM

GPS point: \_\_\_\_\_

**Indicators:**



Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

..

Floodplain unit:



Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Early (herbaceous & seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**



Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



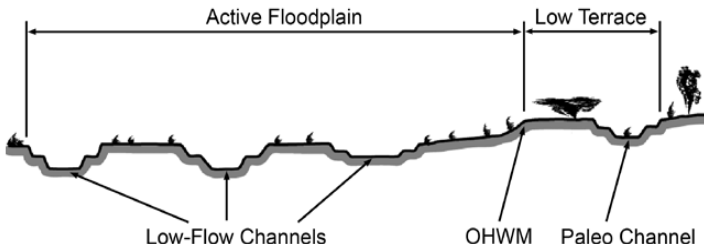
Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: <u>Sandy loam</u>			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 100-10x		<b>Feature ID:</b> D100-10x		<b>Date:</b> 4/29/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 40.1380, -120.2726			
<b>Potential anthropogenic influences on the channel system:</b> Drainage comes from hillslope flowing into culvert under Highway.					
<b>Brief site description:</b> Drainage comes from hillslope flowing into culvert; appears to lose a lot of indicators on other side of highway draining into Honey Lake.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies </div> <div> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </div> </div>					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>   </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other: </div> </div> </li> </ol>					



### Wentworth Size Classes

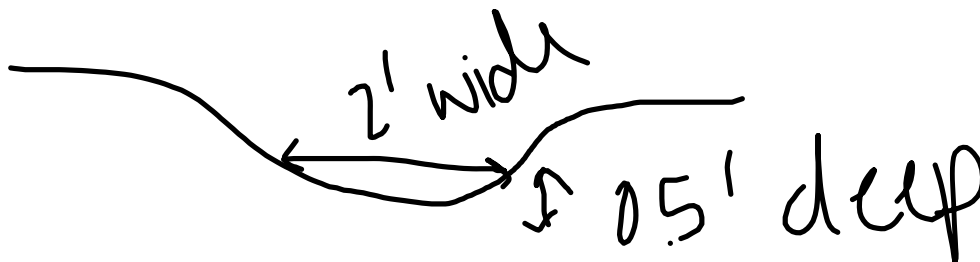
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D100-10x

Cross section ID:

Date: 4/29/2020 Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Break in bank slope



Change in vegetation species



Other: \_\_\_\_\_



Change in vegetation cover



Other: \_\_\_\_\_

**Comments:**

No water present, likely ephemeral drainage for snowmelt. Change in sediment as stream bed has sandy bottom with pebbles.

Floodplain unit:

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Mid (herbaceous, shrubs, saplings)



Early (herbaceous &amp; seedlings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Soil development



Ripples



Surface relief



Drift and/or debris



Other: \_\_\_\_\_



Presence of bed and bank



Other: \_\_\_\_\_



Benches



Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 01-10x Feature ID: W01-10x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/17/2020

Investigator(s): B. Cohen, M. Gould Section, Township, Range: 27N, 14E, 26  
 Local relief (hillside, terrace, etc.): Valley floor Local Relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): D Lat: 40.1686 Long: -120.3645 Datum: NAD83  
 Soil Map Unit Name: Mottsville Loamy Coarse Sand, 2 to 9 percent slopes NWI classification: FEW

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: Riparian/Fresh Emergent Wetland with all three wetland parameters met. Stream feature across highway connected through culverts however on this side of highway there may be a relict channel or hydrological connection through culverts.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u> = Total Cover		

Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1 <u>Salexi</u>	<u>Salix exigua</u>	<u>55</u>	<u>YES</u>	<u>FACW</u>
2 <u>Roscal</u>	<u>Rosa californica</u>	<u>45</u>	<u>YES</u>	<u>FAC</u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
5 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>100</u> = Total Cover		

Herb Stratum (Plot size: <u>6 ft</u> )				
1 <u>Unkar</u>	<u>Unknown carex</u>	<u>85</u>	<u>YES</u>	<u>FAC</u>
2 <u>Junbal</u>	<u>Juncus balticus</u>	<u>45</u>	<u>YES</u>	<u>FACW</u>
3 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
4 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
5 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
6 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
7 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
8 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
9 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
10 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
11 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>130</u> = Total Cover		

Woody Vine Stratum (Plot size: <u>    </u> )				
1 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
2 <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
		<u>0</u> = Total Cover		

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>100</u>	x 2 = <u>200</u>
FAC species <u>130</u>	x 3 = <u>390</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>230</u> (A)	<u>590</u> (B)
Prevalence Index = B/A = <u>2.5652</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation  
Present?

Yes X No     

Remarks: Area dominated by hydrophytic vegetation.

SOIL							Sampling Point: 01-10x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-7	10 YR 3/2	100					Sandy clay loam	Roots
7-12	10 YR 3/1	70	5 YR 3/4	30	C	M	Sandy clay loam	Prominent redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input checked="" type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
						<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: _____ Roots _____ Depth (inches): _____ 12 _____						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Hydric soil evidenced by indicator F6 by having a layer that is at least 4 inches thick starting within 8 inches of the mineral soil surface with a matrix value of 3 or less and a chroma of 1 or less with at least 2 percent prominent redox concentrations occurring as soft masses.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input checked="" type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ 5 _____ (includes capillary fringe)						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>  								
<b>Remarks:</b> Primary hydrology evidenced by saturation within 12 inches of the soil surface. In addition the sample area has drainage patterns, saturation visible on aerial imagery, and passes FAC-Neutral Test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 02-10x Feature ID: U01-10x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/17/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 27N, 14E, 26  
 Local relief (hillside, terrace, etc.): Road slope Local Relief (concave, convex, none): Convex Slope (%): 15  
 Subregion (LRR): D Lat: 40.1687 Long: -120.3645 Datum: NAD83  
 Soil Map Unit Name: Mottsville Loamy Coarse Sand, 2 to 9 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W01-10x, no wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: _____ )				
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
<b>Sapling/Shrub Stratum</b> (Plot size: _____ )				
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		0	= Total Cover	
<b>Herb Stratum</b> (Plot size: 6 ft _____ )				
1	<u>Brotec</u> <u>Bromus tectorum</u>	60	YES	UPL
2	<u>Elyhis</u> <u>Elymus hispidus</u>	20	YES	UPL
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		80	= Total Cover	
<b>Woody Vine Stratum</b> (Plot size: _____ )				
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 20 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant  
Species Across All Strata: 2 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>80</u>	x 5 = <u>400</u>
Column Totals: <u>80</u> (A)	<u>400</u> (B)
Prevalence Index = B/A = <u>5</u>	

### Hydrophytic Vegetation Indicators:

- No 1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation  
Present?

Yes      No X

Remarks: No hydrophytic vegetation observed in sample area.

<b>SOIL</b>							<b>Sampling Point:</b> 02-10x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

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**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)                          Sandy Redox (S5) <input type="checkbox"/> Histic Epipedon (A2)                 Stripped Matrix (S6) <input type="checkbox"/> Black Histic (A3)                      Loamy Mucky Mineral (F1) <input type="checkbox"/> Hydrogen Sulfide (A4)                Loamy Gleyed Matrix (F2) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )     Depleted Matrix (F3) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )             Redox Dark Surface (F6) <input type="checkbox"/> Depleted Below Dark Surface (A11)   Depleted Dark Surface (F7) <input type="checkbox"/> Thick Dark Surface (A12)             Redox Depressions (F8) <input type="checkbox"/> Sandy Mucky Mineral (S1)             Vernal Pools (F9) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
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<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

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<b>Restrictive Layer (if present):</b> Type: _____ road base Depth (inches): _____ 0	<b>Hydric Soil Present?</b>  Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> X <input type="checkbox"/>
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**Remarks:** Soil pit not dug in compacted gravel road slope. Best place for upland boundary.

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### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one required; check all that apply)</u> <table style="width: 100%;"> <tr> <td><input type="checkbox"/> Surface Water (A1)</td> <td><input type="checkbox"/> Salt Crust (B11)</td> </tr> <tr> <td><input type="checkbox"/> High Water Table (A2)</td> <td><input type="checkbox"/> Biotic Crust (B12)</td> </tr> <tr> <td><input type="checkbox"/> Saturation (A3)</td> <td><input type="checkbox"/> Aquatic Invertebrates (B13)</td> </tr> <tr> <td><input type="checkbox"/> Water Marks (B1) (<b>Nonriverine</b>)</td> <td><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td><input type="checkbox"/> Sediment Deposits (B2) (<b>Nonriverine</b>)</td> <td><input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</td> </tr> <tr> <td><input type="checkbox"/> Drift Deposits (B3) (<b>Nonriverine</b>)</td> <td><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td><input type="checkbox"/> Surface Soil Cracks (B6)</td> <td><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td><input type="checkbox"/> Water-Stained Leaves (B9)</td> <td><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> </table>	<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<u>Secondary Indicators (2 or more required)</u> <table style="width: 100%;"> <tr> <td><input type="checkbox"/> Water Marks (B1) (<b>Riverine</b>)</td> </tr> <tr> <td><input type="checkbox"/> Sediment Deposits (B2) (<b>Riverine</b>)</td> </tr> <tr> <td><input type="checkbox"/> Drift Deposits (B3) (<b>Riverine</b>)</td> </tr> <tr> <td><input type="checkbox"/> Drainage Patterns (B10)</td> </tr> <tr> <td><input type="checkbox"/> Dry-Season Water Table (C2)</td> </tr> <tr> <td><input type="checkbox"/> Crayfish Burrows (C8)</td> </tr> <tr> <td><input type="checkbox"/> Saturation Visible on Aerial Imagery (C5)</td> </tr> <tr> <td><input type="checkbox"/> Shallow Aquitard (D3)</td> </tr> <tr> <td><input type="checkbox"/> FAC-Neutral Test (D5)</td> </tr> </table>	<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )	<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )	<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C5)	<input type="checkbox"/> Shallow Aquitard (D3)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)																											
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)																											
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)																											
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)																											
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)																											
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)																											
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)																											
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)																											
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)																											
<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )																												
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )																												
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<input type="checkbox"/> Saturation Visible on Aerial Imagery (C5)																												
<input type="checkbox"/> Shallow Aquitard (D3)																												
<input type="checkbox"/> FAC-Neutral Test (D5)																												

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<b>Field Observations:</b> Surface Water Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present?     Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present?        Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b>  Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X <input type="checkbox"/>
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**Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:**

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**Remarks:** No hydrology indicators observed.

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 07-10x Feature ID: W03-10x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/17/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 27N, 14E, 25  
 Local relief (hillside, terrace, etc.): Roadside ditch Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 40.1657 Long: -120.3516 Datum: NAD83  
 Soil Map Unit Name: Plinco Loam, 2 to 9 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: Fresh emergent wetland with all three wetland indicators present, soils are problematic and assumed hydric - see soil remarks.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		0	= Total Cover	
Herb Stratum	(Plot size: 6 ft _____)			
1	Typlat Typha latifolia	75	YES	OBL
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		75	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 25 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>75</u>	x 1 = <u>75</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>75</u> (A)	<u>75</u> (B)
Prevalence Index = B/A = <u>1</u>	

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Bare ground is water. Area dominated by hydrophytic vegetation.



SOIL		Sampling Point: 07-10x				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
0-12	10 YR 3/1	100			Clay loam	Rocky
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.			<sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)				
		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input checked="" type="checkbox"/> Other (Explain in Remarks)				
		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
<b>Restrictive Layer (if present):</b>		<b>Hydric Soil Present?</b>				
Type: <u>                    Rocks                    </u> Depth (inches): <u>                    12                    </u>		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
<b>Remarks:</b> Passes rapid test. Soil is problematic. Dark color of matrix in soil may obscure redox features and soil is fully saturated. Feature is in a concave position with dominance of hydrophytic vegetation with surface water and meets seasonal ponded soils conditions (Chapter 5). In addition region lacks redox features in wetland areas.						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (2 or more required)</b>				
Primary Indicators (minimum of one required; check all that apply)						
<input checked="" type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )				
<input checked="" type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )				
<input checked="" type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )				
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Water-Stained Leaves (B9)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)				
<input type="checkbox"/> Other (Explain in Remarks)						
<b>Field Observations:</b>		<b>Wetland Hydrology Present?</b>				
Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
(includes capillary fringe)						
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> Primary hydrology evidenced by surface water and saturation and water table within 12 inches of the soil surface.						

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 08-10x Feature ID: U03-10x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/17/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 27N, 14E, 25  
 Local relief (hillside, terrace, etc.): Road slope Local Relief (concave, convex, none): Convex Slope (%): 10  
 Subregion (LRR): D Lat: 40.1657 Long: -120.3516 Datum: NAD83  
 Soil Map Unit Name: Plinco Loam, 2 to 9 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W03-10x, no wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>		= Total Cover

Herb Stratum (Plot size: <u>6 ft</u> )	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
1 <u>Cicint</u>	<u>Cichorium intybus</u>	<u>12</u>	<u>YES</u>	<u>FACU</u>
2 <u>Elyhis</u>	<u>Elymus hispidus</u>	<u>20</u>	<u>YES</u>	<u>UPL</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>32</u>		= Total Cover

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 60 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>12</u>	x 4 =	<u>48</u>
UPL species <u>20</u>	x 5 =	<u>100</u>
Column Totals: <u>32</u> (A)		<u>148</u> (B)
Prevalence Index = B/A = <u>4.625</u>		

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: No hydrophytic vegetation observed.

SOIL							Sampling Point:		08-10x	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Matrix		Redox Features				Texture	Remarks		
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>				
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.				
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)										
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)							
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)							
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)							
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)							
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)							
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)							
<input type="checkbox"/> Sandy Gleyed Matrix (S4)						<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
<b>Restrictive Layer (if present):</b> Type: _____ road base Depth (inches): _____ 0					<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
<b>Remarks:</b> Soil pit not dug in compacted road slope										
<b>HYDROLOGY</b>										
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>					
Primary Indicators (minimum of one required; check all that apply)										
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )					
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )					
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )					
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)					
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)					
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)					
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)					
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)					
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>					
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____								
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (includes capillary fringe)		Depth (inches): _____								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>										
<b>Remarks:</b> No hydrology indicators observed.										

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 10-10x Feature ID: W4-10x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/20/2020  
 Investigator(s): B. Cohen, R. Stoddard Section, Township, Range: 26N, 15E, 12  
 Local relief (hillside, terrace, etc.): Valley floor Local Relief (concave, convex, none): Convex Slope (%): 5  
 Subregion (LRR): D Lat: 40.1181 Long: -120.2353 Datum: NAD83  
 Soil Map Unit Name: Mottsville Gravelly Loamy Coarse Sand, 2 to 9 percent slopes NWI classification: FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: Strange indicators present with artmesia growing in wetland and wetland on slope in convex position. Still meets all 3 wetland indicators.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1 <u>Elaang</u>	<u>Elaeagnus angustifolia</u>	<u>65</u>	<u>YES</u>	<u>FAC</u>
2				
3				
4				
5 <u>Arttri</u>	<u>Artemisia tridentata</u>	<u>35</u>	<u>YES</u>	<u>UPL</u>
		<u>100</u>		= Total Cover

Herb Stratum (Plot size: <u>6 ft</u> )				
1 <u>Conmac</u>	<u>Conium maculatum</u>	<u>50</u>	<u>YES</u>	<u>FACW</u>
2 <u>Junbal</u>	<u>Juncus balticus</u>	<u>30</u>	<u>YES</u>	<u>FACW</u>
3 <u>Unkcar</u>	<u>Unknown carex</u>	<u>20</u>	<u>YES</u>	<u>FAC</u>
4				
5				
6				
7				
8				
9				
10				
11				
		<u>100</u>		= Total Cover

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>80</u>	x 2 =	<u>160</u>
FAC species <u>85</u>	x 3 =	<u>255</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>35</u>	x 5 =	<u>175</u>
Column Totals: <u>200</u> (A)		<u>590</u> (B)
Prevalence Index = B/A =		<u>2.95</u>

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Area dominated by hydrophytic vegetation.

SOIL							Sampling Point: 10-10x	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10 YR 2/1	100					Loamy sand	
6-12	10 YR 2/1	95	5 YR 5/8	5	C	M	Loamy sand	Prominent Redox
12-16	10 YR 3/1	65	5 YR 5/8	5	C	M	Loamy sand	Prominent Redox
12-16	10 YR 4/1	30					Loamy sand	
<sup>1</sup> Type: C=Covered, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.					<sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)				Indicators for Problematic Hydric Soils <sup>3</sup> :	
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)				<input type="checkbox"/> 1 cm Muck (A9) (LRR C)	
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)				<input type="checkbox"/> 2 cm Muck (A10) (LRR B)	
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)				<input type="checkbox"/> Reduced Vertic (F18)	
<input type="checkbox"/> Stratified Layers (A5) (LRR C)			<input type="checkbox"/> Depleted Matrix (F3)				<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)			<input checked="" type="checkbox"/> Redox Dark Surface (F6)				<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
							<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	
Restrictive Layer (if present):					Hydric Soil Present?			
Type: _____					Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Depth (inches): _____								
Remarks: Hydric soil evidenced by indicator F6 by having a layer that is at least 4 inches thick starting within 8 inches of the mineral soil surface and has a matrix value of 3 or less and a chroma of 1 or less with at least 2 percent prominent redox concentrations occurring as soft masses.								
HYDROLOGY								
Wetland Hydrology Indicators:					Secondary Indicators (2 or more required)			
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) (Riverine)			
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) (Riverine)			
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) (Riverine)			
<input type="checkbox"/> Water Marks (B1) (Nonriverine)			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)			<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)			
Field Observations:					Wetland Hydrology Present?			
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____					
Saturation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches): 4					
(includes capillary fringe)								
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks: Primary hydrology evidenced by saturation present within 12 inches of the soil surface and area passes FAC-Neutral Test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 11-10x Feature ID: U4-10x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/20/2020  
 Investigator(s): B. Cohen, R. Stoddard Section, Township, Range: 26N, 15E, 12  
 Local relief (hillside, terrace, etc.): Valley floor Local Relief (concave, convex, none): Convex Slope (%): 4  
 Subregion (LRR): D Lat: 40.1181 Long: -120.2355 Datum: NAD83  
 Soil Map Unit Name: Mottsville Gravelly Loamy Coarse Sand, 2 to 9 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W4-10x, no wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1	Arttri	Artemisia tridentata	40	YES UPL
2				
3				
4				
5				
			<u>40</u>	= Total Cover

Herb Stratum (Plot size: <u>6 ft</u> )				
1	Brotec	Bromus tectorum	60	YES UPL
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
			<u>60</u>	= Total Cover

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
			<u>0</u>	= Total Cover

%Bare Ground in Herb Stratum: 15 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>100</u>	x 5 = <u>500</u>
Column Totals: <u>100</u> (A)	<u>500</u> (B)
Prevalence Index = B/A = <u>5</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: No hydrophytic vegetation observed.

SOIL		Sampling Point: 11-10x				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
0-8	10 YR 2/2	100			Loamy sand	
8-16	10 YR 2/1	100			Loamy sand	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.				<sup>4</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
				<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<b>Restrictive Layer (if present):</b>				<b>Hydric Soil Present?</b>		
Type: _____ Depth (inches): _____				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> No hydric soil indicators observed.						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)						
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>				<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____				
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (includes capillary fringe)		Depth (inches): _____				
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> Soil is a little damp but not saturated, no hydrology indicators observed.						

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 12-10x Feature ID: W05-10x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/21/2020  
 Investigator(s): B. Cohen, R. Stoddard Section, Township, Range: 26N, 16E, 18  
 Local relief (hillside, terrace, etc.): Roadside depression Local Relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): D Lat: 40.115 Long: -120.2273 Datum: NAD83  
 Soil Map Unit Name: Truckee Loam, 0 to 2 percent slopes NWI classification: FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: Fresh Emergent Wetland, all three wetland parameters observed. Soils are problematic and assumed hydric - see soil remarks.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>		= Total Cover

Herb Stratum (Plot size: <u>6 ft</u> )				
1 <u>Typlat</u>	<u>Typha latifolia</u>	<u>100</u>	<u>YES</u>	<u>OBL</u>
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>100</u>		= Total Cover

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>100</u>	x 1 = <u>100</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>100</u> (B)
Prevalence Index = B/A = <u>1</u>	

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Area dominated by OBL vegetation.



SOIL							Sampling Point: 12-10x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features					
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-12	10 YR 2/1	100					Sandy loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input checked="" type="checkbox"/> Other (Explain in Remarks)		
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Soils Pass rapid test; surface water in a concave position with a dominance of obligate veg. Hydric soils assumed and meets, at minimum seasonally ponded soils (Chapter 5). Soil is highly saturated and very dark which may obscure redox features. Region lacks redox features in wetland areas.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)						Secondary Indicators (2 or more required)		
<input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0.25</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>  								
<b>Remarks:</b> Primary hydrology evidenced by surface water and saturation and water table within 12 inches of the soil surface. In addition saturation is visible on aerial imagery and passes FAC-Neutral Test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 13-10x Feature ID: U05-10x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/21/2020  
 Investigator(s): B. Cohen, R. Stoddard Section, Township, Range: 26N, 16E, 18  
 Local relief (hillside, terrace, etc.): Road slope Local Relief (concave, convex, none): Convex Slope (%): 15  
 Subregion (LRR): D Lat: 40.115 Long: -120.2273 Datum: NAD83  
 Soil Map Unit Name: Truckee Loam, 0 to 2 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: Upland pair point to U05-10x, hydrology present as saturation but not dominated by hydrophytic vegetation and lacks hydric soil indicators.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>6 ft</u> )				
1 <u>Urt dio</u>	<u>Urtica dioica</u>	<u>30</u>	<u>YES</u>	<u>FAC</u>
2 <u>Brotec</u>	<u>Bromus tectorum</u>	<u>35</u>	<u>YES</u>	<u>UPL</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>65</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 35 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>30</u>	x 3 =	<u>90</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>35</u>	x 5 =	<u>175</u>
Column Totals: <u>65</u> (A)		<u>265</u> (B)
Prevalence Index = B/A = <u>4.0769</u>		

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation  
Present?

Yes      No X

Remarks: Area not dominated by hydrophytic vegetation.

SOIL							Sampling Point: 13-10x	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	10 YR 4/2	100					Loam	
3-5	2.5 Y 3/2	100					Loam	Rocky
5-12	10 YR 2/2	100					Loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)					
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)					
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b> Type: _____ Rocks Depth (inches): _____ 12					<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
<b>Remarks:</b> No hydric soil indicators observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>			
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (includes capillary fringe)		Depth (inches): _____ 10						
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Primary hydrology evidenced by saturation within 12 inches of the soil surface.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 14-10x Feature ID: W6-10x  
Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/21/2020  
Investigator(s): B. Cohen, R. Stoddard Section, Township, Range: 26N, 16E, 26  
Local relief (hillside, terrace, etc.): Floodplain/OHWM Local Relief (concave, convex, none): Concave Slope (%): 2  
Subregion (LRR): D Lat: 40.0728 Long: -120.1469 Datum: NAD83  
Soil Map Unit Name: Fluvents-Riverwash Complex, 0 to 1 percent slopes NWI classification: FEW/Riverine  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
Are Vegetation No, Soil Yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
Hydric Soil Present? Yes x No       
Wetland Hydrology Present? Yes x No       
Is the Sampled Area within a Wetland? Yes x No     

Remarks: Riparian wetland with all three wetland parameters present, soils are problematic and assumed hydric - see soil remarks.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		0	= Total Cover	
Herb Stratum	(Plot size: 6 ft _____)			
1	Elepal	90	YES	OBL
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		90	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 10 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>90</u>	x 1 = <u>90</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>90</u> (A)	<u>90</u> (B)
Prevalence Index = B/A = <u>1</u>	

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Area dominated by OBL vegetation.

<b>SOIL</b>							Sampling Point: 14-10x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-1	10YR 2/1	100					Silty salt	Darker than 2/1 very silty
1-16	5Y 4/1	100					Sand	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input checked="" type="checkbox"/> Other (Explain in Remarks)		
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: _____ Depth (inches): _____						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Soil is problematic. Area has primary hydrology with obligate vegetation in a concave position on a sand bar on a floodplain. Soil is believed hydric due to depleted matrix color but redox is not present likely due to its presence in a vegetated sand bar within a perennial river's OHWM.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input checked="" type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):		_____		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Water Table Present?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):		0			
Saturation Present?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):		0			
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Primary hydrology evidenced by saturation and water table within 12 inches of the soil surface. In addition drainage patterns were observed and area passes FAC-Neutral Test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 15-10x Feature ID: U6-10x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/21/2020  
 Investigator(s): B. Cohen, R. Stoddard Section, Township, Range: 26N, 16E, 26  
 Local relief (hillside, terrace, etc.): Valley floor Local Relief (concave, convex, none): None Slope (%): 3  
 Subregion (LRR): D Lat: 40.0728 Long: -120.1468 Datum: NAD83  
 Soil Map Unit Name: Fluvents-Riverwash Complex, 0 to 1 percent slopes NWI classification: FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W6-10x, no wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1	Arttri	Artemisia tridentata	35	YES UPL
2				
3				
4				
5				
			<u>35</u>	= Total Cover

Herb Stratum (Plot size: <u>6 ft</u> )				
1	Leplat	Lepidium latifolium	75	YES FAC
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
			<u>75</u>	= Total Cover

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
			<u>0</u>	= Total Cover

%Bare Ground in Herb Stratum:      % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>75</u>	x 3 = <u>225</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>35</u>	x 5 = <u>175</u>
Column Totals: <u>110</u> (A)	<u>400</u> (B)
Prevalence Index = B/A = <u>3.6364</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Area not dominated by hydrophytic vegetation.

SOIL							Sampling Point: 15-10x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	5 Y 4/3	100					Loamy sand	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> No hydric soil indicators observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 19-10x Feature ID: W9-10x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/22/2020  
 Investigator(s): B. Cohen, R. Stoddard Section, Township, Range: 25N, 17E, 21  
 Local relief (hillside, terrace, etc.): Roadside depression Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 40.0013 Long: -120.0865 Datum: NAD83  
 Soil Map Unit Name: Calpine Sandy Loam, 0 to 2 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: Potentially in relict channel or connect to water movement or changed hydrology. Classified as riparian/fresh emergent wetland.  
 All three wetland indicators present, soils are problematic and assumed hydric - see soil remarks.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____ 15 ft _____)			
1	Sallexi Salix exigua	65	YES	FACW
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		65	= Total Cover	
Herb Stratum	(Plot size: _____ 6 ft _____)			
1	Leplat Lepidium latifolium	20	YES	FAC
2	Polmon Polypogon monspeliensis	60	YES	FACW
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		80	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum:      % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species  
 That Are OBL, FACW, or FAC: 3 (A)  
 Total Number of Dominant Species Across All Strata: 3 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>125</u>	x 2 =	<u>250</u>
FAC species <u>20</u>	x 3 =	<u>60</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>145</u>	(A)	<u>310</u> (B)
Prevalence Index = B/A = <u>2.1379</u>		

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Area dominated by hydrophytic vegetation.



SOIL							Sampling Point: 19-10x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	2.5 Y 4/3	100					Sand	
3-5	10 YR 2/2	92	7.5 YR 4/6	8			Sandy clay loam	Prominent redox
5-16	10 YR 4/3	90	7.5 YR 4/6	10			Sand	Prominent redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input checked="" type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input checked="" type="checkbox"/> Other (Explain in Remarks)		
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Soils are problematic. They do not strictly meet indicator S5 or show a depleted matrix. However the feature is in a concave position with likely seasonally ponded soils, primary hydrology and a dominance of hydrophytic vegetation. Soil nearly meets indicator S5 and nearly has a depleted matrix however the target layer does not have a chroma of 2 or less. The layer directly above target layer is dark and has redox and target layer has high percentage of prominent redox. For these reasons soil is assumed hydric								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one required; check all that apply)</b>						<b>Secondary Indicators (2 or more required)</b>		
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 7 (includes capillary fringe)						<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>  								
<b>Remarks:</b> Primary hydrology evidenced by saturation within 12 inches of soil surface. In addition drainage patterns were observed and area passes FAC-Neutral Test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Feature ID: U9-10x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/22/2020  
 Investigator(s): B. Cohen, R. Stoddard Section, Township, Range: 25N, 17E, 21  
 Local relief (hillside, terrace, etc.): Valley floor Local Relief (concave, convex, none): Convex Slope (%): 3  
 Subregion (LRR): D Lat: 40.0014 Long: -120.0865 Datum: NAD83  
 Soil Map Unit Name: Calpine Sandy Loam, 0 to 2 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W9-10x, no wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>6 ft</u> )				
1 <u>Brotec</u>	<u>Bromus tectorum</u>	<u>65</u>	<u>YES</u>	<u>UPL</u>
2 <u>Leplat</u>	<u>Lepidium latifolium</u>	<u>35</u>	<u>YES</u>	<u>FAC</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>100</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>35</u>	x 3 =	<u>105</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>65</u>	x 5 =	<u>325</u>
Column Totals: <u>100</u> (A)		<u>430</u> (B)
Prevalence Index = B/A = <u>4.3</u>		

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Area not dominated by hydrophytic vegetation.

SOIL							Sampling Point: 20-10x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10 YR 4/2	100					Loam	
6-12	10 YR 3/3	100					Loamy sand	
6-12	10 YR 3/3	95	5 YR 5/6	5	C	M	Loamy sand	Prominent Redox
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____					<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
<b>Remarks:</b> No hydric soil indicators observed, does not meet indicator requirements for S5. In addition no hydrology or dominance of hydrophytic vegetation present - soils are not problematic.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>			
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberopitc City/County: Lassen County Feature ID: W11-10x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/23/2020  
 Investigator(s): B. Cohen, R. Stoddard Section, Township, Range: 25N, 17E, 21  
 Local relief (hillside, terrace, etc.): Valley floor Local Relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): D Lat: 39.9998 Long: -120.0846 Datum: NAD83  
 Soil Map Unit Name: Rose Creek Loam, 0 to 1 percent slopes NWI classification: FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: Seasonal wetland. Problematic soil, see soil remarks.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____ )	% Cover	Species?	Status
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____ )			
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
5 _____	_____	_____	_____	_____
		0	= Total Cover	
Herb Stratum	(Plot size: _____ 6 ft _____ )			
1 <u>Juneff</u>	<u>Juncus effusus</u>	100	YES	FACW
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
5 _____	_____	_____	_____	_____
6 _____	_____	_____	_____	_____
7 _____	_____	_____	_____	_____
8 _____	_____	_____	_____	_____
9 _____	_____	_____	_____	_____
10 _____	_____	_____	_____	_____
11 _____	_____	_____	_____	_____
		100	= Total Cover	
Woody Vine Stratum	(Plot size: _____ )			
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>100</u>	x 2 = <u>200</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>200</u> (B)
Prevalence Index = B/A = <u>2</u>	

### Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Area dominated by FACW vegetation.

SOIL		Sampling Point: 22-10x				
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>						
Depth (inches)	Matrix		Redox Features		Texture	Remarks
	Color (moist)	%	Color (moist)	%		
0-16	10 YR 2/1	100			Clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.			<sup>4</sup> Location: PL=Pore Lining, M=Matrix.			
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						
<input type="checkbox"/> Histosol (A1)		<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input checked="" type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Stripped Matrix (S6)				
<input type="checkbox"/> Black Histic (A3)		<input type="checkbox"/> Loamy Mucky Mineral (F1)				
<input type="checkbox"/> Hydrogen Sulfide (A4)		<input type="checkbox"/> Loamy Gleyed Matrix (F2)				
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )		<input type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )		<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)		<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Thick Dark Surface (A12)		<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)		<input type="checkbox"/> Vernal Pools (F9)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)						
<b>Restrictive Layer (if present):</b>				<b>Hydric Soil Present?</b>		
Type: _____				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Depth (inches): _____						
<b>Remarks:</b> Soil is problematic and assumed hydric based on Concave surface with primary hydrology and a dominance of hydrophytic plants. Region lacks redox in many wetlands and soil is very dark which may obscure redox features and feature has seasonally ponded soils.						
<b>HYDROLOGY</b>						
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>		
Primary Indicators (minimum of one required; check all that apply)						
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)		<input checked="" type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input checked="" type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>				<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____				
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____ (includes capillary fringe)				
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>						
<b>Remarks:</b> Algal Matting/biotic crust present and saturation is visible on google earth. In addition area passes FAC-Neutral Test.						

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 23-10x Feature ID: U11-10x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/23/2020  
 Investigator(s): B. Cohen, R. Stoddard Section, Township, Range: 25N, 17E, 21  
 Local relief (hillside, terrace, etc.): Valley floor Local Relief (concave, convex, none): None Slope (%): 2  
 Subregion (LRR): D Lat: 39.9998 Long: -120.0846 Datum: NAD83  
 Soil Map Unit Name: Rose Creek Loam, 0 to 1 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W11-10x, no wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>	= Total Cover	

Herb Stratum (Plot size: <u>6 ft</u> )				
1 <u>Brotec</u>	<u>Bromus tectorum</u>	<u>25</u>	<u>YES</u>	<u>UPL</u>
2 <u>Elyhis</u>	<u>Elymus hispidus</u>	<u>70</u>	<u>YES</u>	<u>UPL</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>95</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 5 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant  
Species Across All Strata: 2 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>95</u>	x 5 =	<u>475</u>
Column Totals: <u>95</u> (A)		<u>475</u> (B)
Prevalence Index = B/A =		<u>5</u>

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation  
Present?

Yes      No X

Remarks: No hydrophytic vegetation observed.

SOIL							Sampling Point:		23-10x
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix		Redox Features				Texture	Remarks	
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>			
0-12	10 YR 3/2	100					Loam		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)									
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)						
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)						
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)						
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)						
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)						
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)						
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)						
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.			
<input type="checkbox"/> Sandy Gleyed Matrix (S4)									
Restrictive Layer (if present): Type: _____ Shovel refusal Depth (inches): _____ 12					Hydric Soil Present?  Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Remarks: No hydric soil indicators observed.									
HYDROLOGY									
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>				
Primary Indicators (minimum of one required; check all that apply)									
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )				
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )				
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )				
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)				
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)					Wetland Hydrology Present?  Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
Remarks: No hydrology indicators observed.									

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

**Remarks:** Soils are problematic, see soil remarks. Likely relict channel was present and primary hydrology evident in April.

Yes ☒ No ☐

**Remarks:** Area dominated by hydrophytic vegetation.



SOIL							Sampling Point:	24-10x
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10 YR 3/2	100					Clay loam	Rocky
6-16	10 YR 4/1	100					Clay loam	Less rocky
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input checked="" type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Large rocks present that seem introduced. Soil is problematic. Region lacks redox features in many wetlands. The soil is disturbed and likely manipulated but has primary hydrology and a dominance of hydrophytic plants in a concave surface and likely seasonally ponded. Soil matrix is depleted at 6 inches and below but lacks redox features to satisfy criteria for indicator F3 but shows strong depletion matrix value and chroma therefore soil is assumed hydric.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): 10						
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Depth (inches): 0				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Primary hydrology evidenced by water table and saturation within 12 inches of the soil surface. In addition area passes FAC-Neutral Test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 25-10x Feature ID: U12-10x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/23/2020  
 Investigator(s): B. Cohen, R. Stoddard Section, Township, Range: 25N, 17E, 28  
 Local relief (hillside, terrace, etc.): Valley floor Local Relief (concave, convex, none): Convex Slope (%): 4  
 Subregion (LRR): D Lat: 39.9963 Long: -120.0807 Datum: NAD83  
 Soil Map Unit Name: Rose Creek Loam, 0 to 1 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

**Remarks:** Area has been graded or disturbed, some artmesia remains but many herbaceous species gone. Hydric soil present but sample area lacks hydrology indicators and hydrophytic vegetation.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: 15 ft _____)			
1	Arttri      Artemisia tridentata	65	YES	UPL
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
		65	= Total Cover	
Herb Stratum	(Plot size: 6 ft _____)			
1	Elyhis      Elymus hispidus	25	YES	UPL
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
		25	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1	_____	_____	_____	_____
2	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 75 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>90</u>	x 5 = <u>450</u>
Column Totals: <u>90</u> (A)	<u>450</u> (B)
Prevalence Index = B/A = <u>5</u>	

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

**Hydrophytic Vegetation Present?**

Yes      No X

**Remarks:** Disturbed vegetation, no hydrophytic vegetation observed.

SOIL		Sampling Point: 25-10x						
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features		Texture	Remarks		
	Color (moist)	%	Color (moist)	%				
0-5	10 YR 3/3	100			clay loam			
5-9	10 YR 3/2	92	7.5 YR 3/4	8	C	M	clay loam	Distinct Redox
9-16	10 YR 3/2	100					clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.					<sup>4</sup> Location: PL=Pore Lining, M=Matrix.			
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)		<input type="checkbox"/> Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Stripped Matrix (S6)						
<input type="checkbox"/> Black Histic (A3)		<input type="checkbox"/> Loamy Mucky Mineral (F1)						
<input type="checkbox"/> Hydrogen Sulfide (A4)		<input type="checkbox"/> Loamy Gleyed Matrix (F2)						
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )		<input type="checkbox"/> Depleted Matrix (F3)						
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )		<input checked="" type="checkbox"/> Redox Dark Surface (F6)						
<input type="checkbox"/> Depleted Below Dark Surface (A11)		<input type="checkbox"/> Depleted Dark Surface (F7)						
<input type="checkbox"/> Thick Dark Surface (A12)		<input type="checkbox"/> Redox Depressions (F8)						
<input type="checkbox"/> Sandy Mucky Mineral (S1)		<input type="checkbox"/> Vernal Pools (F9)						
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<b>Restrictive Layer (if present):</b>					<b>Hydric Soil Present?</b>			
Type: _____ Depth (inches): _____					Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
<b>Remarks:</b> Hydric soils evidenced by indicator F6. Upland pair point has no hydrophytic vegetation or hydrology indicators but meets criteria for hydric soils.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators (2 or more required)</b>				
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )				
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )				
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )				
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)				
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)					Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 6-10x Feature ID: NW01-10x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/17/2020  
 Investigator(s): B. Cohen, M. Gould Section, Township, Range: 27N, 14E, 25  
 Local relief (hillside, terrace, etc.): Valley floor Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 40.1661 Long: -120.3529 Datum: NAD83  
 Soil Map Unit Name: Plinco Loam, 2 to 9 percent slopes NWI classification: FEW  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Small area with phalaris and willows. The rest of the suspect area is only willows growing on raised berm above road shoulder.  
 Suspect area lacks hydrology and hydric soil indicators.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		

Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1 <u>Salix</u>	<u>Salix exigua</u>	<u>80</u>	<u>YES</u>	<u>FACW</u>
2				
3				
4				
5				
		<u>80</u>		

Herb Stratum (Plot size: <u>6 ft</u> )				
1 <u>Phaar</u>	<u>Phalaris arundinacea</u>	<u>75</u>	<u>YES</u>	<u>FACW</u>
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>75</u>		

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		

%Bare Ground in Herb Stratum: 20 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)  
 Total Number of Dominant Species Across All Strata: 2 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>155</u>	x 2 = <u>310</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>155</u> (A)	<u>310</u> (B)
Prevalence Index = B/A = <u>2</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Area dominated by FACW vegetation.

SOIL							Sampling Point:	6-10x
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 2/1	100					Clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> No hydric soil indicators observed and is not likely problematic soils due to lack of strong hydrology indicators.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Area passes FAC-Neutral Test but lacks another secondary hydrology indicator.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 16-10x Feature ID: NW2-10x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/22/2020  
 Investigator(s): B. Cohen, R. Stoddard Section, Township, Range: 25N, 16E, 01  
 Local relief (hillside, terrace, etc.): Floodplain Local Relief (concave, convex, none): Concave Slope (%): 3  
 Subregion (LRR): D Lat: 40.052 Long: -120.127 Datum: NAD83  
 Soil Map Unit Name: Fluvents-Riverwash Complex, 0 to 1 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation Yes, Soil No, or Hydrology Yes significantly disturbed?      Are "Normal Circumstances" present? Yes      No X  
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Part of the riparian zone on both sides of river may have been graded or disturbed. May have been riparian wetland at one time especially on south side of river. Dominant hydrophytic vegetation but lacks hydrology and hydric soils.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1 <u>Salexi</u>	<u>Salix exigua</u>	<u>35</u>	<u>YES</u>	<u>FACW</u>
2				
3				
4				
5				
		<u>35</u>		= Total Cover

Herb Stratum (Plot size: <u>6 ft</u> )				
1 <u>Equarv</u>	<u>Equisetum arvense</u>	<u>15</u>	<u>YES</u>	<u>FAC</u>
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>15</u>		= Total Cover

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 70 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>35</u>	x 2 =	<u>70</u>
FAC species <u>15</u>	x 3 =	<u>45</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>50</u> (A)		<u>115</u> (B)
Prevalence Index = B/A = <u>2.3</u>		

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Area dominated by hydrophytic vegetation.

SOIL							Sampling Point: 16-10x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	2.5Y 5/3	100					Sand	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____					<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
<b>Remarks:</b> No hydric soil indicators observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>			
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )		<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Other (Explain in Remarks)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Lower layer slightly damp sand but not saturated. No drainage patterns in this area near river, likely too far or high above channel and overflow does not come up to this zone. Passes FAC-Neutral Test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 18-10x Feature ID: NW3-10x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/22/2020  
 Investigator(s): B. Cohen, R. Stoddard Section, Township, Range: 25N, 17E, 20  
 Local relief (hillside, terrace, etc.): Valley floor Local Relief (concave, convex, none): Concave Slope (%): 3  
 Subregion (LRR): D Lat: 40.0084 Long: -120.0913 Datum: NAD83  
 Soil Map Unit Name: Calpine Sandy Loam, 0 to 2 percent slopes NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Suspect patch of willows confirmed as upland. No wetland indicators observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____ 15 ft _____)			
1 Salexi	Salix exigua	90	YES	FACW
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
5 _____	_____	_____	_____	_____
		90	= Total Cover	
Herb Stratum	(Plot size: _____ 6 ft _____)			
1 Brotec	Bromus tectorum	65	YES	UPL
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
5 _____	_____	_____	_____	_____
6 _____	_____	_____	_____	_____
7 _____	_____	_____	_____	_____
8 _____	_____	_____	_____	_____
9 _____	_____	_____	_____	_____
10 _____	_____	_____	_____	_____
11 _____	_____	_____	_____	_____
		65	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 25 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>90</u>	x 2 = <u>180</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>65</u>	x 5 = <u>325</u>
Column Totals: <u>155</u> (A)	<u>505</u> (B)
Prevalence Index = B/A = <u>3.2581</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation

No 2 - Dominance Test is >50%

No 3 - Prevalence Index is ≤3.0<sup>1</sup>

     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

     5 - Wetland Non-Vascular Plants<sup>1</sup>

     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

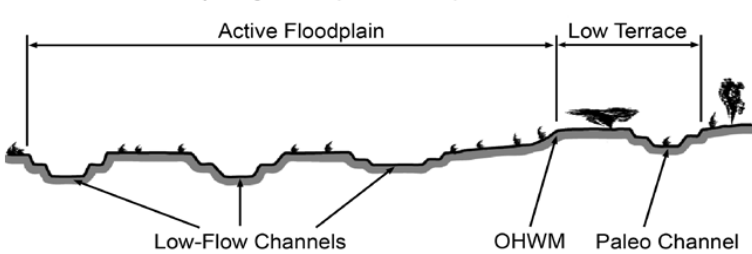
Hydrophytic Vegetation Present? Yes      No X

Remarks: Not dominated by hydrophytic vegetation.



SOIL							Sampling Point: 18-10x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 3/3	100					Sandy loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> No hydric soil indicators observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

<b>Sampling Point:</b> 10-11x		<b>Feature ID:</b> D01-11x		<b>Date:</b> 4/21/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, L. Hoffman					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.8920, -120.0181			
<b>Potential anthropogenic influences on the channel system:</b> Manipulated drainage that flows from culvert.					
<b>Brief site description:</b> Drainage flows from culvert potentially going to sheet flow out of ROW.					
<b>Checklist of resources (if available):</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies: _____         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b> _____  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:</b> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer         </div> <div style="width: 45%;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other: _____         </div> </div>					

### Wentworth Size Classes

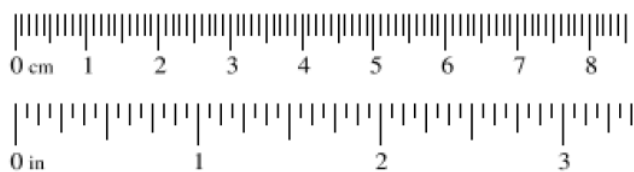
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

Mud

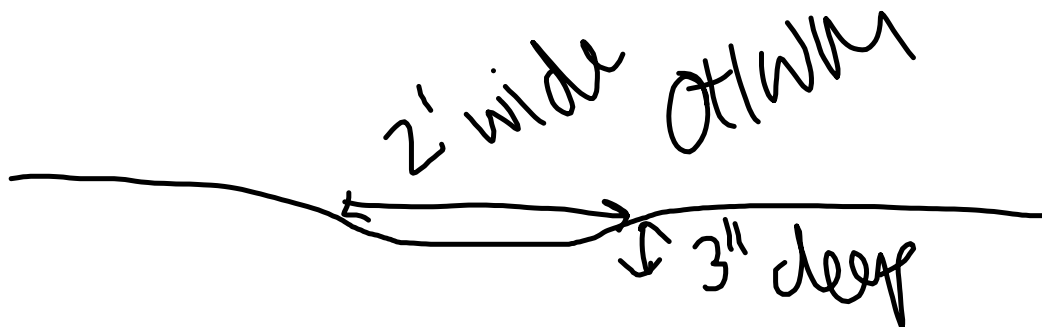


Feature ID: D01-11x

Cross section ID:

Date: 4/21/2020

Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

## Indicators:

☒ Change in average sediment texture☐ Change in vegetation species☒ Change in vegetation cover☒ Break in bank slope☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_

## Comments:

No water present, likely ephemeral stream. Change in sediment as stream bed has a sandy bottom with pebbles above OHWM.

Floodplain unit:☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

## Characteristics of the floodplain unit:

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

☐ NA☐ Early (herbaceous & seedlings)☐ Mid (herbaceous, shrubs, saplings)☐ Late (herbaceous, shrubs, mature trees)

## Indicators:

☐ Mudcracks☐ Ripples☐ Drift and/or debris☐ Presence of bed and bank☐ Benches☐ Soil development☐ Surface relief☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_☐ Other: \_\_\_\_\_

## Comments:

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 11-11x		<b>Feature ID:</b> D02-11x		<b>Date:</b> 4/21/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, L. Hoffman					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site?		<b>Location Details:</b>			
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?					
		<b>Projection:</b> Lambert <b>Datum:</b> NAD83			
		<b>Coordinates:</b> 39.8915, -120.0185			
<b>Potential anthropogenic influences on the channel system:</b> Disturbed drainage with heavily incised erosion; drains from parking/pullout area.					
<b>Brief site description:</b> Drainage flows from parking/pullout area going to sheet flow at riparian floodplain.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> _____		<b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

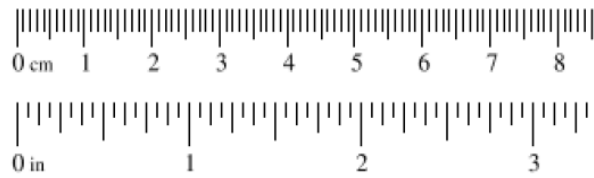
Inches (in)	Millimeters (mm)	Wentworth size class
10.08	256	Boulder
2.56	64	Cobble
0.157	4	Pebble
0.079	2.00	Granule
0.039	1.00	Very coarse sand
0.020	0.50	Coarse sand
1/2 0.0098	0.25	Medium sand
1/4 0.005	0.125	Fine sand
1/8 0.0025	0.0625	Very fine sand
1/16 0.0012	0.031	Coarse silt
1/32 0.00061	0.0156	Medium silt
1/64 0.00031	0.0078	Fine silt
1/128 0.00015	0.0039	Very fine silt
		Clay

Gravel

Sand

Silt

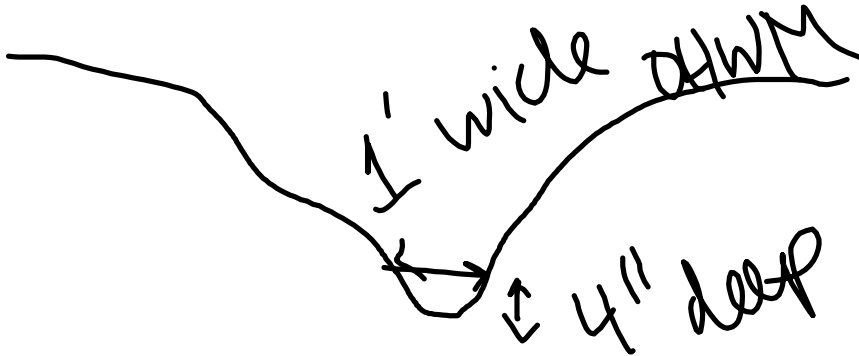
Mud



Feature ID: D02-11x

Cross section ID:

Date: 4/21/2020 Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

**Indicators:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species                  | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

**Comments:**

No water present, likely ephemeral stream. Change in sediment as stream bed has a sandy bottom with incised channels of Artemisia on bank slope.

Floodplain unit:☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

- |   |  |
|---|--|
| <input type="checkbox"/> NA                             | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

**Indicators:**

- |   |   |
|---|---|
| <input type="checkbox"/> Mudcracks                | <input type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples                  | <input type="checkbox"/> Surface relief   |
| <input type="checkbox"/> Drift and/or debris      | <input type="checkbox"/> Other: _____     |
| <input type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____     |
| <input type="checkbox"/> Benches                  | <input type="checkbox"/> Other: _____     |

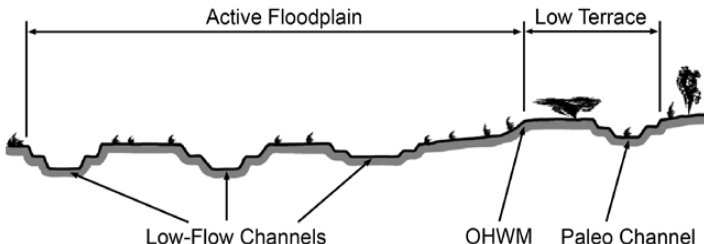
**Comments:**



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

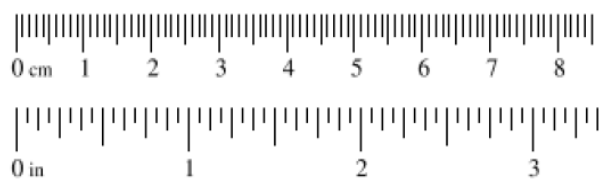
<b>Floodplain unit:</b>	<b>Low-Flow Channel</b>	<b>Active Floodplain</b>	<b>Low Terrace</b>
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 12-11x		<b>Feature ID:</b> D03-11x		<b>Date:</b> 4/21/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, L. Hoffman					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.8795, -120.0282			
<b>Potential anthropogenic influences on the channel system:</b> Disturbed drainage with heavily incised erosion; potentially near old road.					
<b>Brief site description:</b> Ephemeral stream within canyon (20 feet lower than TOB).					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<b>Hydrogeomorphic Floodplain Units</b> 					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via:             <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div style="text-align: center;"> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

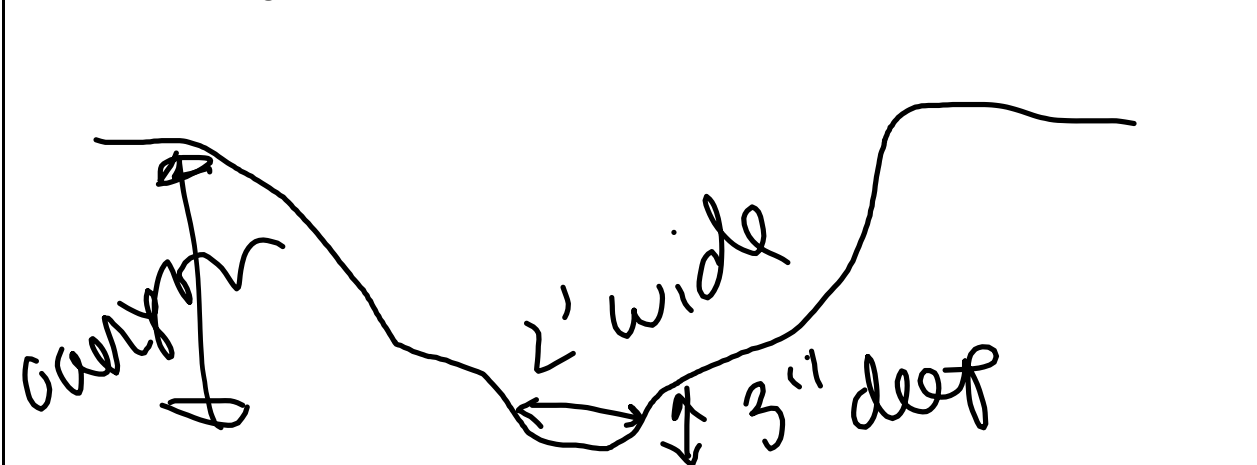
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D03-11x

Cross section ID:

Date: 4/21/2020 Time:

Cross section drawing:OHWM

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

No water present, likely ephemeral stream. Change in sediment as stream bed has a sandy bottom with incised channels of Artemisia and basin wild rye on bank slope.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

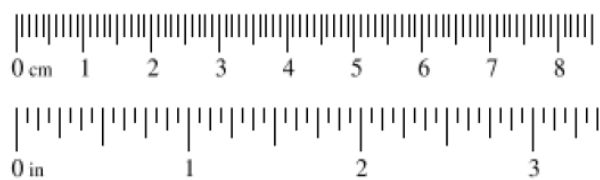
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# **Arid West Ephemeral and Intermittent Streams OHW M Datasheet**

<b>Sampling Point:</b> <u>15-11x</u>		<b>Feature ID:</b> <u>D04-11x</u>		<b>Date:</b> <u>4/22/2020</u>	
<b>Project:</b> <u>Zayo Fiberoptic</u>					
<b>Location:</b> <u>Lassen County</u>			<b>Photo begin/end file#:</b> <u>See Field Photos</u>		
<b>Investigator(s):</b> <u>M. Oats, L. Hoffman</u>					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> <u>Lambert</u> <b>Datum:</b> <u>NAD83</u> <b>Coordinates:</b> <u>39.8592, -120.0410</u>			
<b>Potential anthropogenic influences on the channel system:</b> Drainage has a lot of rip rap (held by metal fencing/caging), on banks throughout survey area.					
<b>Brief site description:</b> Ephemeral stream along Highway, seems to be highly used for storm water drainage from highway.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  Period of record:  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </div> </div>					
<p><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via: <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <input type="checkbox"/> Mapping on aerial photograph    <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Digitized on computer    <input type="checkbox"/> Other: </div> </li> </ol>					

### Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

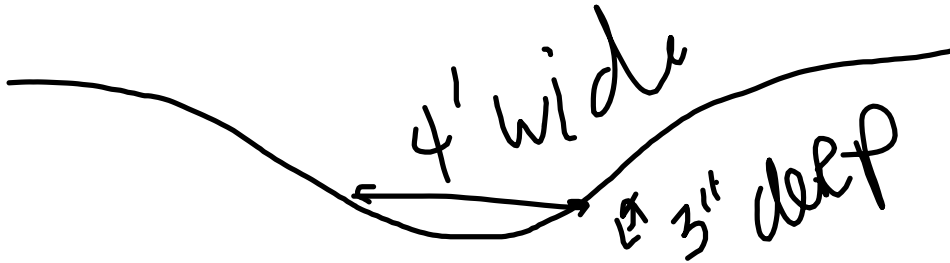


Feature ID: D04-11x

Cross section ID:

Date: 4/22/2020 Time:

Cross section drawing:



OHW

GPS point: \_\_\_\_\_

**Indicators:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species                  | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

**Comments:**

No water present, likely ephemeral stream. Change in sediment as stream bed has a silty bottom with predominantly Artemisia on slopes.

Floodplain unit:

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

- |   |  |
|---|--|
| <input type="checkbox"/> NA                             | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

**Indicators:**

- |   |   |
|---|---|
| <input type="checkbox"/> Mudcracks                | <input type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples                  | <input type="checkbox"/> Surface relief   |
| <input type="checkbox"/> Drift and/or debris      | <input type="checkbox"/> Other: _____     |
| <input type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____     |
| <input type="checkbox"/> Benches                  | <input type="checkbox"/> Other: _____     |

**Comments:**



<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

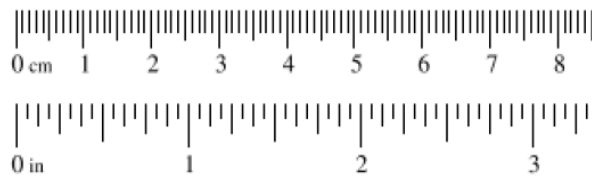
<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b>			
Average sediment texture: _____			
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %			
Community successional stage:			
<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)		
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)		
<b>Indicators:</b>			
<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development		
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief		
<input type="checkbox"/> Drift and/or debris	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Presence of bed and bank	<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Benches	<input type="checkbox"/> Other: _____		
<b>Comments:</b>			

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 100-11x		<b>Feature ID:</b> D100-11x		<b>Date:</b> 4/29/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, B. Cohen					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		<b>Location Details:</b>  <b>Projection:</b> Lambert <b>Datum:</b> NAD83 <b>Coordinates:</b> 39.9050, -120.0135			
<b>Potential anthropogenic influences on the channel system:</b> Old river channel, adjacent to highway.					
<b>Brief site description:</b> Oxbow ponded feature near Long Valley Creek.					
<b>Checklist of resources (if available)</b> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Aerial photography  <b>Dates:</b> _____  <input checked="" type="checkbox"/> Topographic maps  <input type="checkbox"/> Geologic maps  <input type="checkbox"/> Vegetation maps  <input checked="" type="checkbox"/> Soils maps  <input type="checkbox"/> Rainfall/precipitation maps  <input type="checkbox"/> Existing delineation(s) for site  <input checked="" type="checkbox"/> Global positioning system (GPS)  <input type="checkbox"/> Other studies         </div> <div> <input type="checkbox"/> Stream gage data  <b>Gage number:</b> _____  <b>Period of record:</b>  <input type="checkbox"/> History of recent effective discharges  <input type="checkbox"/> Results of flood frequency analysis  <input type="checkbox"/> Most recent shift-adjusted rating  <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         </div> </div>					
<div style="text-align: center;"> <b>Hydrogeomorphic Floodplain Units</b>  </div>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b> <ol style="list-style-type: none"> <li>1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.</li> <li>2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.             <ol style="list-style-type: none"> <li>a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol> </li> <li>4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.</li> <li>5. Identify the OHW M and record the indicators. Record the OHW M position via:             <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph  <input type="checkbox"/> Digitized on computer             </div> <div> <input checked="" type="checkbox"/> GPS  <input type="checkbox"/> Other:             </div> </div> </li> </ol>					

### Wentworth Size Classes

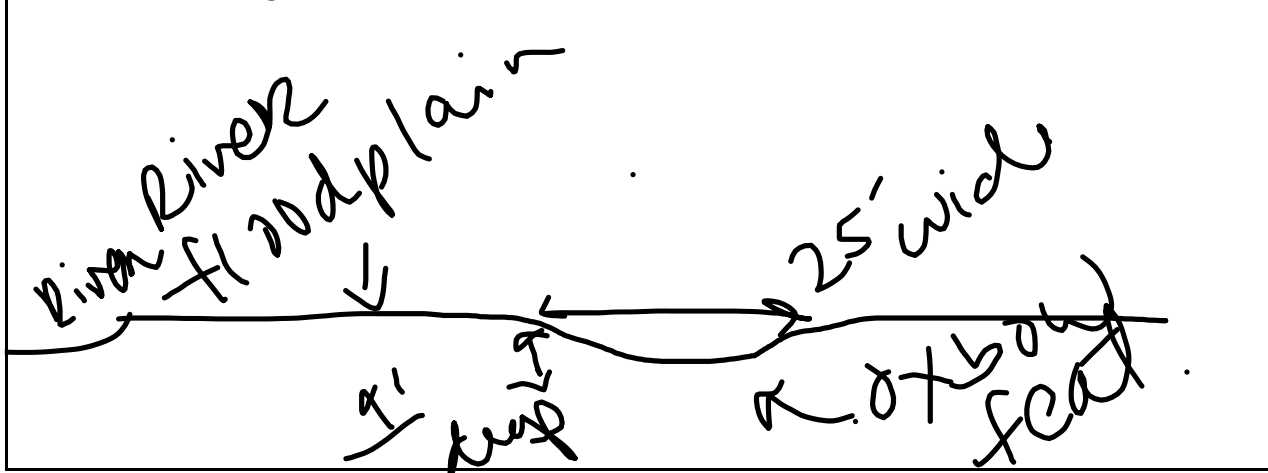
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D100-11x Cross section ID:

Date: 4/29/2020 Time:

Cross section drawing:



OHWM

GPS point: \_\_\_\_\_

**Indicators:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species                  | <input type="checkbox"/> Other: _____                   |
| <input checked="" type="checkbox"/> Change in vegetation cover         | <input type="checkbox"/> Other: _____                   |

**Comments:**

Oxbow feature adjacent to Long Valley Creek, but lacks drainage connectivity. Water present at time of survey.

Floodplain unit:

☐ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:

- |   |  |
|---|--|
| <input type="checkbox"/> NA                             | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)      |
| <input type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

**Indicators:**

- |   |   |
|---|---|
| <input type="checkbox"/> Mudcracks                | <input type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples                  | <input type="checkbox"/> Surface relief   |
| <input type="checkbox"/> Drift and/or debris      | <input type="checkbox"/> Other: _____     |
| <input type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____     |
| <input type="checkbox"/> Benches                  | <input type="checkbox"/> Other: _____     |

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 01-11x Feature ID: W01-11x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/20/2020  
 Investigator(s): M. Oats, L. Hoffman Section, Township, Range: 24N, 17E, 12  
 Local relief (hillside, terrace, etc.): Roadside depression Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 39.9514 Long: -120.0323 Datum: NAD 83  
 Soil Map Unit Name: Pits and Dumps NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: All three wetland parameters observed, indicating a wetland sample point.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

<b>Sapling/Shrub Stratum</b> (Plot size: <u>15' radius</u> )				
1 <u>Salexi</u>	<u>Salix exigua</u>	<u>30</u>	<u>YES</u>	<u>FACW</u>
2				
3				
4				
5				
		<u>30</u>	= Total Cover	

<b>Herb Stratum</b> (Plot size: <u>5' radius</u> )				
1 <u>Dispi</u>	<u>Distichlis spicata</u>	<u>75</u>	<u>YES</u>	<u>FAC</u>
2 <u>Junbal</u>	<u>Juncus balticus</u>	<u>20</u>	<u>YES</u>	<u>FACW</u>
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>95</u>	= Total Cover	

<b>Woody Vine Stratum</b> (Plot size: <u>30' radius</u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 5 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>50</u>	x 2 = <u>100</u>
FAC species <u>75</u>	x 3 = <u>225</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>125</u> (A)	<u>325</u> (B)
Prevalence Index = B/A = <u>2.6</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation

Yes 2 - Dominance Test is >50%

Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>

     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

     5 - Wetland Non-Vascular Plants<sup>1</sup>

     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

Remarks: Hydrophytic vegetation observed as indicated by a dominance of FAC and FACW vegetation.

SOIL							Sampling Point: 01-11x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10 YR 4/3	100					Loamy sand	Organic matter
2-6	7.5 YR 5/3	70	5 YR 4/6	10	C	PL, M	Loamy sand	Prominent redox concentrations
	7.5 YR 4/2	20					Loamy sand	Prominent redox concentrations
6-16	5 YR 5/3	50					Loamy sand	
	7.5 YR 4/2	50					Loamy sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.
<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input checked="" type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
--	--	--

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**  
 Type: None  
 Depth (inches): N/A

**Hydric Soil Present?**  
 Yes ☒ No ☐

**Remarks:** Sample point satisfies indicator F8, Redox Depressions as wetland is within a depressional feature, with two culverts, likely subject to ponding occasionally in the wetter months. Soil has 5 percent or more prominent redox concentrations occurring as soft masses and pore linings in a layer that is 2 inches or more thick and starts at a depth less than 4 inches from the soil surface.

**HYDROLOGY**

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
<b>Primary Indicators (minimum of one required; check all that apply)</b>		
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input checked="" type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**  
 Surface Water Present? Yes ☐ No ☒ Depth (inches):             
 Water Table Present? Yes ☐ No ☒ Depth (inches):             
 Saturation Present? Yes ☐ No ☒ Depth (inches):             
 (includes capillary fringe)

**Wetland Hydrology Present?**  
 Yes ☒ No ☐

**Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:** Hydrology indicators present as indicated by biotic crust, as well as noticeable drainage patterns and the vegetation passes the FAC-Neutral test.

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 02-11x Feature ID: U01-11x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/20/2020  
 Investigator(s): M. Oats, L. Hoffman Section, Township, Range: 24N, 17E, 12  
 Local relief (hillside, terrace, etc.): Roadside swale Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 39.9514 Long: -120.0323 Datum: NAD 83  
 Soil Map Unit Name: Pits and Dumps NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W01-11x, no wetland parameters observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: <u>30'</u> radius )	% Cover	Species?	Status
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum	(Plot size: <u>5'</u> radius )			
1	Arttri	Artemisia tridentata	15	YES UPL
2				
3				
4				
5				
		<u>15</u>	= Total Cover	

Herb Stratum	(Plot size: <u>5'</u> radius )			
1	Dispi	Distichlis spicata	60	YES FAC
2	Junbal	Juncus balticus	10	NO FACW
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>70</u>	= Total Cover	

Woody Vine Stratum	(Plot size: <u>30'</u> radius )			
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum:      % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 1 (A)  
  
 Total Number of Dominant Species Across All Strata: 2 (B)  
  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>10</u>	x 2 =	<u>20</u>
FAC species <u>60</u>	x 3 =	<u>180</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>15</u>	x 5 =	<u>75</u>
Column Totals: <u>85</u> (A)		<u>275</u> (B)
Prevalence Index = B/A = <u>3.2353</u>		

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: No hydrophytic vegetation observed.



SOIL							Sampling Point: 02-11x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	10 YR 4/3	100					Loamy sand	Organic matter
3-5	7.5 YR 4/3	99	5 YR 4/6	1	C	PL	Loamy sand	Prominent redox concentrations
5-16	7.5 YR 4/3	98	5 YR 4/6	2	C	M	Loamy sand	Prominent redox concentrations
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: _____ None						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Depth (inches): _____ N/A								
<b>Remarks:</b> Minimal redox concentrations present, therefore soil does not satisfy any hydric soil indicators.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 04-11x Feature ID: W02-11x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/20/2020  
 Investigator(s): M. Oats, L. Hoffman Section, Township, Range: 24N, 17E, 24  
 Local relief (hillside, terrace, etc.): River terrace Local Relief (concave, convex, none): Convex Slope (%): 1  
 Subregion (LRR): D Lat: 39.9217 Long: -120.019 Datum: NAD 83  
 Soil Map Unit Name: Fluvents Riverwash Complex, 0 to 1 percent slopes NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: All three wetland parameters observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>15' radius</u> )				
1 <u>Salexi</u>	<u>Salix exigua</u>	<u>60</u>	<u>YES</u>	<u>FACW</u>
2				
3				
4				
5				
		<u>60</u>	= Total Cover	

Herb Stratum (Plot size: <u>5' radius</u> )				
1 <u>Junnev</u>	<u>Juncus nevadensis</u>	<u>75</u>	<u>YES</u>	<u>FACW</u>
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>75</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 10 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant  
Species Across All Strata: 2 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>135</u>	x 2 = <u>270</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>135</u> (A)	<u>270</u> (B)
Prevalence Index = B/A = <u>2</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation  
Present?

Yes X No     

Remarks: Hydrophytic vegetation observed as indicated by a dominance of FACW vegetation.

SOIL							Sampling Point: 04-11x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-1	10 YR 4/2	100					Silty loam	Organic matter
1-8	7.5 YR 3/1	65	2.5 YR 4/6	5	C	M	Silty loam	Prominent redox concentrations
	10 YR 4/2	30					Silty loam	Prominent redox concentrations
8-12	7.5 YR 5/2	90	2.5 YR 3/6	10	C	M	Silty loam	
12-16	10 YR 6/2	60	2.5 YR 3/4	30	C	M	Sand	
				10		M		Fe-Mn concretions
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: _____ None								
Depth (inches): _____ N/A						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b> Sample point satisfies indicator F6, Redox Dark Surface. Soil has a matrix value of 3 or less and chroma of 1 or less with at least 2 percent or more prominent redox concentrations occurring as soft masses in a layer that is 4 inches or more thick and starts at a depth less than 8 inches from the soil surface.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input checked="" type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicators present as indicated by noticeable drainage patterns and the vegetation passes the FAC-Neutral test. Also, just outside of sample point (within wetland), surface water is present.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 05-11x Feature ID: U02-11x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/20/2020  
 Investigator(s): M. Oats, L. Hoffman Section, Township, Range: 24N, 17E, 24  
 Local relief (hillside, terrace, etc.): Roadside swale Local Relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): D Lat: 39.9217 Long: -120.019 Datum: NAD 83  
 Soil Map Unit Name: Fluvents Riverwash Complex, 0 to 1 percent slopes NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

**Remarks:** Upland pair point to W02-11x. Sample point on edge of wetland boundary with minimal wetland characteristics present. Area likely inundated as floodplain with wetland characteristics distributed throughout the mosaic; area mapped where all three wetland parameters are present. Floodplain incorporated within TOB of Long Valley Creek.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

Sapling/Shrub Stratum (Plot size: <u>15' radius</u> )				
1	Arttri	Artemisia tridentata	30	YES UPL
2	Salexi	Salix exigua	15	YES FACW
3				
4				
5				
			<u>45</u>	= Total Cover

Herb Stratum (Plot size: <u>5' radius</u> )				
1	Leplat	Lepidium latifolium	40	YES FAC
2	Junnev	Juncus nevadensis	25	YES FACW
3	Brotec	Bromus tectorum	25	YES UPL
4				
5				
6				
7				
8				
9				
10				
11				
			<u>90</u>	= Total Cover

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
			<u>0</u>	= Total Cover

%Bare Ground in Herb Stratum: 10 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	0 x 1 =	0
FACW species	40 x 2 =	80
FAC species	40 x 3 =	120
FACU species	0 x 4 =	0
UPL species	55 x 5 =	275
Column Totals:	<u>135</u> (A)	<u>475</u> (B)
Prevalence Index = B/A =		<u>3.5185</u>

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present?

Yes X No     

**Remarks:** Hydrophytic vegetation present, however sample point is intermixed largely with upland species.

SOIL							Sampling Point: 05-11x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10 YR 4/2	100					Silty loam	
4-9	10 YR 5/3	50					Silty loam	
	10 YR 3/2	50						
9-14	10 YR 5/3	47	5 YR 4/6	6	C	M	Loamy sand	Prominent redox
	10 YR 3/2	47						
14-16	10 YR 6/3	50	5 YR 4/6	20	C	M	Sand	Prominent Redox
	10 YR 4/1	30						
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: _____ None						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Depth (inches): _____ N/A								
<b>Remarks:</b> Redox concentrations present in deeper layers, therefore soil does not satisfy any hydric soil indicators.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

**Remarks:** All three wetland parameters observed. Soils are problematic and assumed hydric - see soil remarks.

Yes ☒ No ☐

**Remarks:** Hydrophytic vegetation observed as indicated by a dominance of OBL and FACW vegetation.

SOIL							Sampling Point: 06-11x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10 YR 4/2	100					Sand	Organic matter
2-10	10 YR 6/2	100					Sand	
10-16	10 YR 6/2	75	7.5 YR 4/6	25	C	M	Sand	Prominent redox concentrations
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input checked="" type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: _____ None						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Depth (inches): _____ N/A								
<b>Remarks:</b> The sample point lacks strong indicators of hydric soil; however, redox is present below 6 inches. Soils are problematic. Hydrology and hydrophytic vegetation are strongly present and feature is in a floodplain landscape position. Additionally, according to the Arid West supplement, the following problematic hydric soil indicator applies: 4. b. 3) Vegetated Sand and Gravel Bars within Floodplain.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> Surface Water (A1)						<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)						<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input checked="" type="checkbox"/> Saturation (A3)						<input checked="" type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )						<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )						<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )						<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)						<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)						<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)						<input type="checkbox"/> Other (Explain in Remarks)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>								
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>								
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicators present as indicated by saturation in the soil, as well as noticeable drainage patterns and the vegetation passes the FAC-Neutral test.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 07-11x Feature ID: U03-11x  
Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/21/2020  
Investigator(s): M. Oats, L. Hoffman Section, Township, Range: 24N, 18E, 31  
Local relief (hillside, terrace, etc.): Floodplain terrace Local Relief (concave, convex, none): Convex Slope (%): 2  
Subregion (LRR): D Lat: 39.9065 Long: -120.013 Datum: NAD 83  
Soil Map Unit Name: Fluvents-Riverwash Complex, 0 to 1 percent slopes NWI classification: None  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes      No x  
Hydric Soil Present? Yes      No x  
Wetland Hydrology Present? Yes      No x  
Is the Sampled Area within a Wetland? Yes      No x

Remarks: Upland pair point to W03-11x. Sample point on edge of wetland boundary with minimal wetland characteristics present. Area likely upper boundary of floodplain terrace. Floodplain incorporated within TOB of Long Valley Creek.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		0	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Sapling/Shrub Stratum (Plot size: <u>15' radius</u> )				
1 <u>Salexi</u>	<u>Salix exigua</u>	20	YES	FACW
2				
3				
4				
5				
		20	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Herb Stratum (Plot size: <u>5' radius</u> )				
1 <u>Sisalt</u>	<u>Sisymbrium altissimum</u>	40	YES	FACU
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		40	= Total Cover	

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		0	= Total Cover	

%Bare Ground in Herb Stratum: 60 % Cover of Biotic Crust:     

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>20</u>	x 2 =	<u>40</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>40</u>	x 4 =	<u>160</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>60</u> (A)		<u>200</u> (B)
Prevalence Index = B/A = <u>3.3333</u>		

## Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: No dominance of hydrophytic vegetation present.



SOIL							Sampling Point: 07-11x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 6/2	100					Sand	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: _____ None								
Depth (inches): _____ N/A						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> Sandy soil above vegetated floodplain with no hydric soil indicators observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input checked="" type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input checked="" type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
(includes capillary fringe)						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> The only hydrology indicator observed is a secondary indicator of sediment deposits (riverine).								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 08-11x Feature ID: W04-11x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/21/2020  
 Investigator(s): M. Oats, L. Hoffman Section, Township, Range: 24N, 18E, 31  
 Local relief (hillside, terrace, etc.): Wetland swale Local Relief (concave, convex, none): Concave Slope (%): 3  
 Subregion (LRR): D Lat: 39.8981 Long: -120.0154 Datum: NAD 83  
 Soil Map Unit Name: Galeppi Sandy Loam, 5 to 30 percent slopes NWI classification: riparian-FEW complex  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>x</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u>    </u>
Hydric Soil Present?	Yes <u>x</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>x</u> No <u>    </u>	

Remarks: All three wetland parameters observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute	Dominant	Indicator
Tree Stratum	(Plot size: _____)	% Cover	Species?	Status
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
		0	= Total Cover	
Sapling/Shrub Stratum	(Plot size: _____)			
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
3 _____	_____	_____	_____	_____
4 _____	_____	_____	_____	_____
5 _____	_____	_____	_____	_____
		0	= Total Cover	
Herb Stratum	(Plot size: 5' radius _____)			
1 <u>Schacu</u>	<u>Schoenoplectus acutus</u>	55	YES	OBL
2 <u>Calcan</u>	<u>Calamagrostis canadensis</u>	35	YES	FACW
3 <u>Junnev</u>	<u>Juncus nevadensis</u>	10	NO	FACW
4 _____	_____	_____	_____	_____
5 _____	_____	_____	_____	_____
6 _____	_____	_____	_____	_____
7 _____	_____	_____	_____	_____
8 _____	_____	_____	_____	_____
9 _____	_____	_____	_____	_____
10 _____	_____	_____	_____	_____
11 _____	_____	_____	_____	_____
		100	= Total Cover	
Woody Vine Stratum	(Plot size: _____)			
1 _____	_____	_____	_____	_____
2 _____	_____	_____	_____	_____
		0	= Total Cover	

%Bare Ground in Herb Stratum: 30 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species  
That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant  
Species Across All Strata: 2 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>55</u>	x 1 = <u>55</u>
FACW species <u>45</u>	x 2 = <u>90</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>145</u> (B)
Prevalence Index = B/A = <u>1.45</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic  
Vegetation  
Present?

Yes X No     

Remarks: Hydrophytic vegetation observed as indicated by a dominance of OBL and FACW vegetation.

SOIL							Sampling Point:		08-11x	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Matrix		Redox Features				Texture	Remarks		
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>				
0-2	10 YR 2/2	100					Silty loam	Organic matter		
2-10	10 YR 3/2	80	5 YR 4/6	20	C	M	Silty clay loam	Prominent redox concentrations		
10-16	10 YR 3/1	85	2.5 YR 2.5/4	15	C	M	Silty clay loam	Prominent redox concentrations		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)										
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)							
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)							
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)							
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)							
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input checked="" type="checkbox"/> Redox Dark Surface (F6)							
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)							
<input type="checkbox"/> Sandy Gleyed Matrix (S4)										
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.										
Restrictive Layer (if present): Type: <u>None</u> Depth (inches): <u>N/A</u>					Hydric Soil Present?  Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
<b>Remarks:</b> Sample point satisfies indicator F6, Redox Dark Surface. Soil has a matrix value of 3 or less and chroma of 2 or less with at least 5 percent or more prominent redox concentrations occurring as soft masses in a layer that is 4 inches or more thick and starts at a depth less than 8 inches from the soil surface.										
<b>HYDROLOGY</b>										
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>					
Primary Indicators (minimum of one required; check all that apply)										
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )					
<input checked="" type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )					
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)		<input checked="" type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )					
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input checked="" type="checkbox"/> Drainage Patterns (B10)					
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)					
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)		<input checked="" type="checkbox"/> Crayfish Burrows (C8)					
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)					
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)					
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>					
Surface Water Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>          </u>		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Water Table Present?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>      5      </u>							
Saturation Present?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>      0      </u>							
(includes capillary fringe)										
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>										
<b>Remarks:</b> Hydrology indicators present as indicated by saturation and water table present within 12 inches of the soil surface, as well as noticeable drainage patterns; saturation is visible on aerial imagery; and the vegetation passes the FAC-Neutral test.										

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 09-11x Feature ID: U04-11x  
Applicant/Owner: Zayo Group State: California Sampling Date: 4/21/2020

Investigator(s): M. Oats, L. Hoffman Section, Township, Range: 24N, 18E, 31  
Local relief (hillside, terrace, etc.): Hillslope Local Relief (concave, convex, none): Convex Slope (%): 4  
Subregion (LRR): D Lat: 39.8981 Long: -120.0154 Datum: NAD 83  
Soil Map Unit Name: Galeppi Sandy Loam, 5 to 30 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W04-11x. Sample point on edge of wetland boundary with minimal wetland characteristics present, and no wetland parameters met.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		0	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>15' radius</u> )				
1	<u>Salexi</u>	<u>Salix exigua</u>	<u>20</u>	<u>YES</u> <u>FACW</u>
2				
3				
4				
5				
		20	= Total Cover	

Herb Stratum (Plot size: <u>5' radius</u> )				
1	<u>Elytra</u>	<u>Elymus trachycaulus</u>	<u>45</u>	<u>YES</u> <u>FACU</u>
2	<u>Brotec</u>	<u>Bromus tectorum</u>	<u>15</u>	<u>YES</u> <u>UPL</u>
3	<u>Junnev</u>	<u>Juncus nevadensis</u>	<u>5</u>	<u>NO</u> <u>FACW</u>
4				
5				
6				
7				
8				
9				
10				
11				
		65	= Total Cover	

Woody Vine Stratum (Plot size: <u>30' radius</u> )				
1				
2				
		0	= Total Cover	

%Bare Ground in Herb Stratum: 35 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>25</u>	x 2 = <u>50</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>45</u>	x 4 = <u>180</u>
UPL species <u>15</u>	x 5 = <u>75</u>
Column Totals: <u>85</u> (A)	<u>305</u> (B)
Prevalence Index = B/A = <u>3.5882</u>	

### Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: No dominance of hydrophytic vegetation observed.

SOIL							Sampling Point: 09-11x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 3/2	100					Loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)					
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)					
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b> Type: _____ None Depth (inches): _____ N/A						<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Remarks:</b> No hydric soil indicators observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>						<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Water Table Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____					
Saturation Present?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____					
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 13-11x Feature ID: W06-11x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/22/2020  
 Investigator(s): M. Oats, L. Hoffman Section, Township, Range: 23N, 17E, 11  
 Local relief (hillside, terrace, etc.): Depression on relic river bed Local Relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): D Lat: 39.8642 Long: -120.0403 Datum: NAD 83  
 Soil Map Unit Name: Vertico-Chalco Association, 2 to 30 percent slopes NWI classification: Riverine  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No       
 Hydric Soil Present? Yes x No       
 Wetland Hydrology Present? Yes x No       
 Is the Sampled Area within a Wetland? Yes x No     

Remarks: Hydrology and hydrophytic vegetation present; however, no soil pit dug due to presence of standing water throughout wetland.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECCENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>		= Total Cover

Sapling/Shrub Stratum (Plot size: <u>15' radius</u> )				
1 <u>Salix</u>	<u>Salix exigua</u>	<u>40</u>	<u>YES</u>	<u>FACW</u>
2				
3				
4				
5				
		<u>40</u>		= Total Cover

Herb Stratum (Plot size: <u>5' radius</u> )				
1 <u>Polmar</u>	<u>Polygonum marinense</u>	<u>50</u>	<u>YES</u>	<u>OBL</u>
2 <u>Rumeri</u>	<u>Rumex crispus</u>	<u>20</u>	<u>YES</u>	<u>FAC</u>
3 <u>Junbal</u>	<u>Juncus balticus</u>	<u>10</u>	<u>NO</u>	<u>FACW</u>
4				
5				
6				
7				
8				
9				
10				
11				
		<u>80</u>		= Total Cover

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>		= Total Cover

%Bare Ground in Herb Stratum: 20 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)  
 Total Number of Dominant Species Across All Strata: 3 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>50</u>	x 1 = <u>50</u>
FACW species <u>50</u>	x 2 = <u>100</u>
FAC species <u>20</u>	x 3 = <u>60</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>120</u> (A)	<u>210</u> (B)
Prevalence Index = B/A = <u>1.75</u>	

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
Yes 2 - Dominance Test is >50%  
Yes 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No     

Remarks: Hydrophytic vegetation observed as indicated by a dominance of OBL and FACW vegetation.

SOIL							Sampling Point:		13-11x	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Matrix		Redox Features				Texture	Remarks		
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>				
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.				
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)										
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>						
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )						
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )						
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Reduced Vertic (F18)						
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Red Parent Material (TF2)						
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)	<input checked="" type="checkbox"/> Other (Explain in Remarks)						
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.						
<input type="checkbox"/> Sandy Gleyed Matrix (S4)										
Restrictive Layer (if present):					Hydric Soil Present?					
Type:	None				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Depth (inches):	N/A									
Remarks: No soil pit dug due to presence of standing water; assumed hydric. Passes rapid test and at minimum shows Seasonally ponded soils.										
HYDROLOGY										
Wetland Hydrology Indicators:					Secondary Indicators (2 or more required)					
Primary Indicators (minimum of one required; check all that apply)										
<input checked="" type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )						
<input checked="" type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )						
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)	<input checked="" type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )						
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)						
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)						
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)						
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)						
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)						
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)						
Field Observations:					Wetland Hydrology Present?					
Surface Water Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	4						
Water Table Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	0						
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):	0						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:										
Remarks: Hydrology indicators present as indicated by pooled surface water, saturation, and high water table present, as well as noticeable drainage patterns and the vegetation passes the FAC-Neutral test.										

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 14-11x Feature ID: U06-11x  
 Applicant/Owner: Zayo Group State: Ca Sampling Date: 4/22/2020  
 Investigator(s): M. Oats, L. Hoffman Section, Township, Range: 23N, 17E, 11  
 Local relief (hillside, terrace, etc.): Hillslope Local Relief (concave, convex, none): Convex Slope (%): 6  
 Subregion (LRR): D Lat: 39.8642 Long: -120.0403 Datum: NAD 83  
 Soil Map Unit Name: Vertico-Chalco Association, 2 to 30 percent slopes NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Upland pair point to W06-11x. Sample point on edge of wetland boundary with no wetland parameters met.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>15' radius</u> )				
1	Arttri	Artemisia tridentata	40	YES UPL
2	Purtri	Purshia tridentata	15	YES UPL
3				
4				
5				
		<u>55</u>	= Total Cover	

Herb Stratum (Plot size: <u>5' radius</u> )				
1	Sisalt	Sisymbrium altissimum	30	YES FACU
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
		<u>30</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 70 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>0</u>	x 3 =	<u>0</u>
FACU species <u>30</u>	x 4 =	<u>120</u>
UPL species <u>55</u>	x 5 =	<u>275</u>
Column Totals: <u>85</u> (A)		<u>395</u> (B)
Prevalence Index = B/A = <u>4.6471</u>		

### Hydrophytic Vegetation Indicators:

     1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: No dominance of hydrophytic vegetation observed.



SOIL							Sampling Point: 14-11x	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10 YR 3/4	100					Silty clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
			Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)						<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b>					<b>Hydric Soil Present?</b>			
Type: _____ None					Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Depth (inches): _____ N/A								
<b>Remarks:</b> No hydric soil indicators observed.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>					<b>Secondary Indicators (2 or more required)</b>			
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )			
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)		<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )			
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )			
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>					<b>Wetland Hydrology Present?</b>			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (includes capillary fringe)		Depth (inches): _____						
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> No hydrology indicators observed.								

# WETLAND DETERMINATION DATA FORM -Arid West Region

v.111618

Project/Site: Zayo Fiberoptic City/County: Lassen County Sampling Point: 03-11x Feature ID: NW01-11x  
 Applicant/Owner: Zayo Group State: California Sampling Date: 4/20/2020  
 Investigator(s): M. Oats, L. Hoffman Section, Township, Range: 24N, 17E, 13  
 Local relief (hillside, terrace, etc.): Valley floor Local Relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR): D Lat: 39.9369 Long: -120.0207 Datum: NAD 83  
 Soil Map Unit Name: Smocreek Silty Clay Loam, 0 to 2 percent slopes NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed?      Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic?      (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>x</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>x</u>
Hydric Soil Present?	Yes <u>    </u> No <u>x</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>x</u>	

Remarks: Sample point located in suspect area, noted by drainage patterns and suspect aerial imagery, however wetland parameters were not observed.

## VEGETATION – Use scientific names of plants. List all species in the plot. MUST LIST COVER IN DESECEENDING ORDER

3/3 Abbrev.	Species Name	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1				
2				
3				
4				
5				
		<u>0</u>	= Total Cover	

Herb Stratum (Plot size: <u>5' radius</u> )	Species Name	% Cover	Dominant Species?	Indicator Status
1	<u>Dispi Distichlis spicata</u>	<u>40</u>	<u>YES</u>	<u>FAC</u>
2	<u>Junbal Juncus balticus</u>	<u>10</u>	<u>NO</u>	<u>FACW</u>
3	<u>Elypon Elymus ponticus</u>	<u>20</u>	<u>YES</u>	<u>UPL</u>
4	<u>Dessop Descurainia Sophia</u>	<u>10</u>	<u>NO</u>	<u>UPL</u>
5				
6				
7				
8				
9				
10				
11				
		<u>80</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>    </u> )				
1				
2				
		<u>0</u>	= Total Cover	

%Bare Ground in Herb Stratum: 15 % Cover of Biotic Crust:     

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>10</u>	x 2 =	<u>20</u>
FAC species <u>40</u>	x 3 =	<u>120</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>30</u>	x 5 =	<u>150</u>
Column Totals: <u>80</u> (A)		<u>290</u> (B)
Prevalence Index = B/A =		<u>3.625</u>

### Hydrophytic Vegetation Indicators:

No 1 - Rapid Test for Hydrophytic Vegetation  
No 2 - Dominance Test is >50%  
No 3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     5 - Wetland Non-Vascular Plants<sup>1</sup>  
     6 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes      No X

Remarks: Hydrophytic vegetation not dominant as indicated by a dominance of FAC and UPL vegetation.

SOIL							Sampling Point: 03-11x	
<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
1-4	7.5 YR 3/2	100					Clay loam	Organic matter
4-6	7.5 YR 5/4	85	7.5 YR 5/6	5	C	M	Sandy loam	Faint redox concentrations
	10 YR 6/3	10					Sandy loam	
6-14	10 YR 2/2	100					Clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: _____ None								
Depth (inches): _____ N/A						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X		
<b>Remarks:</b> Sample point has faint redox concentrations within the matrix, however, does not satisfy any hydric soil indicators.								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>						<b>Secondary Indicators (2 or more required)</b>		
<b>Primary Indicators (minimum of one required; check all that apply)</b>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Biotic Crust (B12)			<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input checked="" type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Thin Muck Surface (C7)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Other (Explain in Remarks)					
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X		Depth (inches): _____						
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X		Depth (inches): _____						
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X		Depth (inches): _____				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X		
(includes capillary fringe)								
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b> Hydrology indicators present as indicated by drainage patterns, however no primary indicators present nor any other secondary indicators. Therefore, wetland hydrology not present.								

# Arid West Ephemeral and Intermittent Streams OHW M Datasheet

<b>Sampling Point:</b> 01-12x		<b>Feature ID:</b> D01-12x		<b>Date:</b> 4/22/2020	
<b>Project:</b> Zayo Fiberoptic					
<b>Location:</b> Lassen County			<b>Photo begin/end file#:</b> See Field Photos		
<b>Investigator(s):</b> M. Oats, L. Hoffman					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site?		<b>Location Details:</b>			
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?					
		<b>Projection:</b> Lambert <b>Datum:</b> NAD83			
		<b>Coordinates:</b> 39.7899, -120.0385			
<b>Potential anthropogenic influences on the channel system:</b>					
Drainage comes from roadway (no culvert) but has (likely placed) boulders in the upper area and then drains to outside of ROW					
<b>Brief site description:</b>					
Non-vegetated roadside drainage ditch along Highway then flows out of ROW, seems to be highly used for storm water drainage from highway.					
<b>Checklist of resources (if available)</b>					
<input checked="" type="checkbox"/> Aerial photography		<input type="checkbox"/> Stream gage data			
<b>Dates:</b> _____		<b>Gage number:</b> _____			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
<p style="text-align: center;"><b>Hydrogeomorphic Floodplain Units</b></p>					
<b>Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:</b>					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHW M and record the indicators. Record the OHW M position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

### Wentworth Size Classes

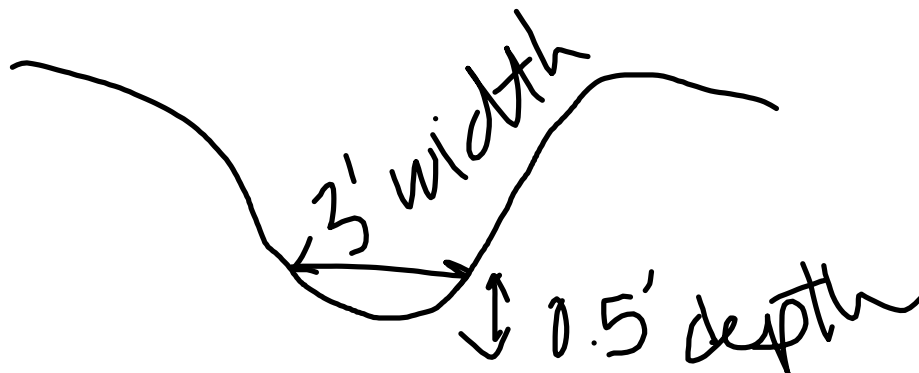
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Feature ID: D01-12x

Cross section ID:

Date: 4/22/2020 Time:

**Cross section drawing:****OHW**

GPS point: \_\_\_\_\_

**Indicators:**

Change in average sediment texture



Change in vegetation species



Change in vegetation cover



Break in bank slope



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

No water present, likely non-vegetated roadside drainage ditch. Change in sediment as stream bed has small boulders in upper reach and a silty bottom with pebbles in lower reach. Drainage predominantly has *Artemisia* and *Sarcobatus* on slopes.

**Floodplain unit:**

Low-Flow Channel



Active Floodplain



Low Terrace

GPS point: \_\_\_\_\_

**Characteristics of the floodplain unit:**

Average sediment texture: \_\_\_\_\_

Total veg cover: \_\_\_\_\_ % Tree: \_\_\_\_\_ % Shrub: \_\_\_\_\_ % Herb: \_\_\_\_\_ %

Community successional stage:



NA



Early (herbaceous &amp; seedlings)



Mid (herbaceous, shrubs, saplings)



Late (herbaceous, shrubs, mature trees)

**Indicators:**

Mudcracks



Ripples



Drift and/or debris



Presence of bed and bank



Benches



Soil development



Surface relief



Other: \_\_\_\_\_



Other: \_\_\_\_\_



Other: \_\_\_\_\_

**Comments:**

<b>Feature ID:</b>	<b>Cross section ID:</b>	<b>Date:</b>	<b>Time:</b>
<b>Floodplain unit:</b> <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace			
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

<b>Floodplain unit:</b>	<input type="checkbox"/> Low-Flow Channel	<input type="checkbox"/> Active Floodplain	<input type="checkbox"/> Low Terrace
<b>GPS point:</b> _____			
<b>Characteristics of the floodplain unit:</b> Average sediment texture: _____ Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ % Community successional stage: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> NA  <input type="checkbox"/> Early (herbaceous &amp; seedlings)         </div> <div style="width: 45%;"> <input type="checkbox"/> Mid (herbaceous, shrubs, saplings)  <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)         </div> </div>			
<b>Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Mudcracks  <input type="checkbox"/> Ripples  <input type="checkbox"/> Drift and/or debris  <input type="checkbox"/> Presence of bed and bank  <input type="checkbox"/> Benches         </div> <div style="width: 45%;"> <input type="checkbox"/> Soil development  <input type="checkbox"/> Surface relief  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Other: _____         </div> </div>			
<b>Comments:</b> <div style="height: 100px; border: 1px solid black;"></div>			

# **APPENDIX E**

## **PLANT LIST**



The species listed in this table include all plant species observed at each sample point for wetlands, uplands, and other waters data points, as well as any other plant species observed within the entire study area for the project.

Scientific Name	Common Name	Family	Origin	Wetland Status (AW 2016)
<i>Achillea millefolium</i>	Yarrow	Asteraceae	native	FACU
<i>Acmispon americanus</i> var. <i>americanus</i>	Spanish lotus	Fabaceae	native	UPL
<i>Acroptilon repens</i>	Russian knapweed	Asteraceae	non-native (invasive)	-
<i>Agastache parvifolia</i>	Small leaved horsemint	Lamiaceae	native	-
<i>Agoseris x elata</i>	Tall agoseris	Asteraceae	native	FAC
<i>Agoseris glauca</i> var. <i>glauca</i>	Short beaked agoseris	Asteraceae	native	FACU
<i>Agoseris grandiflora</i>	Giant mountain dandelion	Asteraceae	native	-
<i>Agoseris heterophylla</i>	Mountain dandelion	Asteraceae	native	-
<i>Agoseris parviflora</i>	False dandelion	Asteraceae	native	FACU
<i>Agropyron cristatum</i> ssp. <i>pectinatum</i>	Crested wheatgrass	Poaceae	non-native	-
<i>Aliciella micromeria</i>	Dainty gilia	Polemoniaceae	native	-
<i>Allium acuminatum</i>	Taper tipped onion	Alliaceae	native	-
<i>Allium anceps</i>	Twin leaved onion	Alliaceae	native	-
<i>Allium bisceptrum</i>	Twincrest onion	Alliaceae	native	FACU
<i>Allium lemmonii</i>	Lemmon's onion	Alliaceae	native	FACU
<i>Alopecurus pratensis</i>	Meadow foxtail	Poaceae	non-native	FACW
<i>Alyssum simplex</i>	Alyssum	Brassicaceae	non-native	-
<i>Amaranthus albus</i>	Tumbleweed	Amaranthaceae	non-native	FACU
<i>Amaranthus powellii</i>	Powell's amaranth	Amaranthaceae	native	-
<i>Amelanchier utahensis</i>	Pale leaved serviceberry	Rosaceae	native	FACU
<i>Amsinckia menziesii</i>	Fiddleneck	Boraginaceae	native	-
<i>Amsinckia tessellata</i>	Devil's lettuce	Boraginaceae	native	-
<i>Antennaria dimorpha</i>	Gray cushion pussytoes	Asteraceae	native	-
<i>Antennaria geyeri</i>	Geyer's pussytoes	Asteraceae	native	-
<i>Antennaria luzuloides</i>	Silvery brown pussytoes	Asteraceae	native	-
<i>Apera interrupta</i>	Dense silky bent	Poaceae	non-native	-
<i>Arctium lappa</i>	Greater burdock	Asteraceae	non-native	-
<i>Arnica fulgens</i>	Hillside arnica	Asteraceae	native	FACU
<i>Arnica sororia</i>	Twin arnica	Asteraceae	native	-
<i>Artemisia douglasiana</i>	California mugwort	Asteraceae	native	FAC
<i>Artemisia ludoviciana</i>	Silver wormwood	Asteraceae	native	FACU

Scientific Name	Common Name	Family	Origin	Wetland Status (AW 2016)
<i>Artemisia spinescens</i>	Budsage	Asteraceae	native	-
<i>Artemisia tridentata</i> ssp. <i>tridentata</i>	Big sagebrush	Asteraceae	native	-
<i>Asclepias fascicularis</i>	Milkweed	Apocynaceae	native	FAC
<i>Asclepias speciosa</i>	Showy milkweed	Apocynaceae	native	FAC
<i>Astragalus agrestis</i>	Purple loco weed	Fabaceae	native	FAC
<i>Astragalus curvicaupus</i> var. <i>curvicaupus</i>	Curved pod milk vetch	Fabaceae	native	-
<i>Astragalus filipes</i>	Narrow pod locoweed	Fabaceae	native	-
<i>Astragalus iodanthus</i> var. <i>diaphanoides</i>	Snake milk vetch	Fabaceae	native	-
<i>Astragalus lentiginosus</i>	Freckled milk vetch	Fabaceae	native	UPL
<i>Astragalus malacus</i>	Shaggy milk vetch	Fabaceae	native	-
<i>Astragalus pulsiferae</i> var. <i>coronensis</i>	Modoc plateau milk vetch	Fabaceae	native	-
<i>Astragalus purshii</i>	Pursh's sheeppod	Fabaceae	native	-
<i>Astragalus whitneyi</i> var. <i>confusus</i>	Whitney's milk vetch	Fabaceae	native	-
<i>Atriplex confertifolia</i>	Spiny saltbush	Chenopodiaceae	native	-
<i>Atriplex gardneri</i> var. <i>falcata</i>	Sickle saltbush	Chenopodiaceae	native	-
<i>Balsamorhiza hirsuta</i>	Hairy balsam root	Asteraceae	native	-
<i>Balsamorhiza sagittata</i>	Arrow leaved balsamroot	Asteraceae	native	-
<i>Barbarea orthoceras</i>	Winter cress	Brassicaceae	native	FACW
<i>Beckmannia syzigachne</i>	American sloughgrass	Poaceae	native	OBL
<i>Blepharipappus scaber</i>	Blepharipappus	Asteraceae	native	-
<i>Boechera retrofracta</i>	Reflexed rockcress	Brassicaceae	native	-
<i>Boechera sparsiflora</i>	Sicklepod rockcress	Brassicaceae	native	-
<i>Brickellia</i> sp.	-	Asteraceae	-	-
<i>Briza maxima</i>	Rattlesnake grass	Poaceae	non-native (invasive)	-
<i>Bromus carinatus</i>	California brome grass	Poaceae	native	-
<i>Bromus hordeaceus</i>	Soft chess	Poaceae	non-native (invasive)	FACU
<i>Bromus inermis</i>	Smooth brome	Poaceae	non-native	FACU
<i>Bromus tectorum</i>	Downy chess	Poaceae	non-native (invasive)	-
<i>Calamagrostis canadensis</i> var. <i>canadensis</i>	Bluejoint	Poaceae	native	FACW
<i>Calystegia occidentalis</i>	Bush morning glory	Convolvulaceae	native	-

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<i>Camassia quamash</i> ssp. <i>breviflora</i>	Small camas	Agavaceae	native	FACW
<i>Camelina microcarpa</i>	False flax	Brassicaceae	non-native	FACU
<i>Carduus nutans</i>	Nodding plumeless thistle	Asteraceae	non-native (invasive)	FACU
<i>Carex abrupta</i>	Abrupt beaked sedge	Cyperaceae	native	FAC
<i>Carex atherodes</i>	Slough sedge	Cyperaceae	native	OBL
<i>Carex athrostachya</i>	Slender leaved sedge	Cyperaceae	native	FACW
<i>Carex douglasii</i>	Douglas sedge	Cyperaceae	native	FAC
<i>Carex nebrascensis</i>	Nebraska sedge	Cyperaceae	native	OBL
<i>Carex pellita</i>	Woolly sedge	Cyperaceae	native	OBL
<i>Carex praegracilis</i>	Field sedge	Cyperaceae	native	FACW
<i>Carex rossii</i>	Ross' sedge	Cyperaceae	native	-
<i>Carex sheldonii</i>	Sheldon's sedge	Cyperaceae	native	OBL
<i>Castilleja chromosa</i>	Desert paintbrush	Orobanchaceae	native	-
<i>Castilleja nana</i>	Dwarf alpine paintbrush	Orobanchaceae	native	-
<i>Castilleja pilosa</i>	Pilose paintbrush	Orobanchaceae	native	-
<i>Castilleja tenuis</i>	Hairy owl's clover	Orobanchaceae	native	FAC
<i>Ceanothus prostratus</i>	Mahala mats	Rhamnaceae	native	-
<i>Centaurea solstitialis</i>	Yellow starthistle	Asteraceae	non-native (invasive)	-
<i>Centaurea stoebe</i> ssp. <i>micranthos</i>	Spotted knapweed	Asteraceae	non-native (invasive)	-
<i>Centromadia pungens</i> ssp. <i>pungens</i>	Common tarweed	Asteraceae	native	FAC
<i>Cercocarpus ledifolius</i>	Desert mountainmahogany	Rosaceae	native	-
<i>Chaenactis douglasii</i> var. <i>douglasii</i>	Dusty maidens	Asteraceae	native	-
<i>Chenopodium album</i>	Lambs quarters	Chenopodiaceae	non-native	FACU
<i>Chenopodium desiccatum</i>	Dry goosefoot	Chenopodiaceae	native	-
<i>Chenopodium simplex</i>	Large seeded goosefoot	Chenopodiaceae	native	-
<i>Chorispora tenella</i>	Crossflower	Brassicaceae	non-native (invasive)	-
<i>Chorizanthe watsonii</i>	Watson's spineflower	Polygonaceae	native	-
<i>Chylismia claviformis</i> ssp. <i>cruciformis</i>	Cruciform evening-primrose	Onagraceae	native	-
<i>Cichorium intybus</i>	Chicory	Asteraceae	non-native	FACU
<i>Cirsium arvense</i>	Canada thistle	Asteraceae	non-native (invasive)	FACU

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<i>Cirsium inamoenum</i> var. <i>inamoenum</i>	Greene's thistle	Asteraceae	native	-
<i>Cirsium neomexicanum</i>	Desert thistle	Asteraceae	native	-
<i>Cirsium scariosum</i>	Elk thistle	Asteraceae	native	FAC
<i>Cirsium vulgare</i>	Bullthistle	Asteraceae	non-native (invasive)	FACU
<i>Clarkia lassenensis</i>	Lassen clarkia	Onagraceae	native	-
<i>Clarkia purpurea</i>	Purple clarkia	Onagraceae	native	-
<i>Clarkia purpurea</i> ssp. <i>quadrivulnera</i>	Purple clarkia	Onagraceae	native	-
<i>Clarkia</i> sp.	-	Onagraceae	-	-
<i>Claytonia rubra</i>	Red stemmed spring beauty	Montiaceae	native	-
<i>Collinsia parviflora</i>	Few flowered blue eyed mary	Plantaginaceae	native	-
<i>Collomia grandiflora</i>	Large flowered collomia	Polemoniaceae	native	-
<i>Conium maculatum</i>	Poison hemlock	Apiaceae	non-native (invasive)	FACW
<i>Convolvulus arvensis</i>	Field bindweed	Convolvulaceae	non-native (invasive)	-
<i>Cordylanthus ramosus</i>	Bushy bird's beak	Orobanchaceae	native	FACU
<i>Crepis acuminata</i>	Tall hawksbeard	Asteraceae	native	-
<i>Crepis bakeri</i>	Baker's hawksbeard	Asteraceae	native	-
<i>Crepis intermedia</i>	Intermediate hawksbeard	Asteraceae	native	-
<i>Crepis modocensis</i> ssp. <i>modocensis</i>	Modoc hawksbeard	Asteraceae	native	-
<i>Crepis modocensis</i> ssp. <i>subacaulis</i>	Modoc hawksbeard	Asteraceae	native	-
<i>Crepis occidentalis</i> ssp. <i>occidentalis</i>	Largeflower hawksbeard	Asteraceae	native	-
<i>Crepis occidentalis</i> ssp. <i>pumila</i>	Largeflower hawksbeard	Asteraceae	native	-
<i>Cressa truxillensis</i>	Alkali weed	Convolvulaceae	native	FACW
<i>Cryptantha circumscissa</i> var. <i>circumscissa</i>	Cushion cryptantha	Boraginaceae	native	-
<i>Cryptantha echinella</i>	Prickly cryptantha	Boraginaceae	native	-
<i>Cryptantha intermedia</i>	Common cryptanth	Boraginaceae	native	-
<i>Cuscuta</i> sp.	-	Convolvulaceae	-	-
<i>Cusickiella douglasii</i>	Alkali draba	Brassicaceae	native	-
<i>Danthonia californica</i>	California oatgrass	Poaceae	native	FAC
<i>Danthonia unispicata</i>	One spiked oatgrass	Poaceae	native	-

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<i>Delphinium andersonii</i>	Anderson larkspur	Ranunculaceae	native	-
<i>Delphinium nuttallianum</i>	Nuttall's larkspur	Ranunculaceae	native	FAC
<i>Deschampsia cespitosa</i>	Tufted hair grass	Poaceae	native	FACW
<i>Descurainia sophia</i>	Herb sophia	Brassicaceae	non-native (invasive)	-
<i>Dipsacus</i> sp.	-	Dipsacaceae	-	-
<i>Distichlis spicata</i>	Saltgrass	Poaceae	native	FAC
<i>Downingia insignis</i>	Harlequin downingia	Campanulaceae	native	OBL
<i>Downingia laeta</i>	Great basin downingia	Campanulaceae	native	OBL
<i>Draba verna</i>	Whitlow grass	Brassicaceae	native	-
<i>Drymocallis glandulosa</i>	Sticky cinquefoil	Rosaceae	native	FAC
<i>Eleocharis palustris</i>	Common spikerush	Cyperaceae	native	OBL
<i>Elymus caput-medusae</i>	Medusa head	Poaceae	non-native	-
<i>Elymus cinereus</i>	Great basin wild rye	Poaceae	native	FAC
<i>Elymus elymoides</i>	Squirreltail grass	Poaceae	native	FACU
<i>Elymus glaucus</i> ssp. <i>glaucus</i>	Blue wild rye	Poaceae	native	FACU
<i>Elymus hispidus</i>	Intermediate wheatgrass	Poaceae	non-native	-
<i>Elymus ponticus</i>	Tall wheatgrass	Poaceae	non-native	-
<i>Elymus spicatus</i>	Blue bunch wheatgrass	Poaceae	native	-
<i>Elymus triticoides</i>	Beardless wild rye	Poaceae	native	FAC
<i>Ephedra viridis</i>	Green ephedra	Ephedraceae	native	-
<i>Epilobium brachycarpum</i>	Willow herb	Onagraceae	native	-
<i>Epilobium densiflorum</i>	Willow herb	Onagraceae	native	FACW
<i>Equisetum hyemale</i> ssp. <i>affine</i>	Giant scouring rush	Equisetaceae	native	FACW
<i>Equisetum laevigatum</i>	Smooth scouring rush	Equisetaceae	native	FACW
<i>Eremogone aculeata</i>	Prickly sandwort	Caryophyllaceae	native	-
<i>Eremogone congesta</i> var. <i>crassula</i>	Rough sandwort	Caryophyllaceae	native	-
<i>Eremothera boothii</i> ssp. <i>alyssooides</i>	Pine creek evening-primrose	Onagraceae	native	-
<i>Eriastrum signatum</i>	-	Polemoniaceae	native	-
<i>Eriastrum sparsiflorum</i>	Great basin eriastrum	Polemoniaceae	native	-
<i>Ericameria bloomeri</i>	Bloomer's goldenbrush	Asteraceae	native	-
<i>Ericameria nauseosa</i>	Rubber rabbitbrush	Asteraceae	native	-
<i>Ericameria nauseosa</i> var. <i>hololeuca</i>	Common rabbitbrush	Asteraceae	native	-

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<i>Ericameria nauseosa</i> var. <i>speciosa</i>	Rubber rabbitbrush	Asteraceae	native	-
<i>Erigeron aphanactis</i>	Rayless shaggy fleabane	Asteraceae	native	-
<i>Erigeron bloomeri</i> var. <i>bloomeri</i>	Scabland fleabane	Asteraceae	native	-
<i>Erigeron divergens</i>	Diffuse daisy	Asteraceae	native	-
<i>Erigeron elegantulus</i>	Volcanic daisy	Asteraceae	native	-
<i>Erigeron linearis</i>	Narrow leaved fleabane	Asteraceae	native	-
<i>Erigeron pumilus</i> var. <i>intermedius</i>	Shaggy fleabane	Asteraceae	native	-
<i>Eriogonum caespitosum</i>	Clumping buckwheat	Polygonaceae	native	-
<i>Eriogonum collinum</i>	Hill buckwheat	Polygonaceae	native	-
<i>Eriogonum elatum</i> var. <i>elatum</i>	Tall buckwheat	Polygonaceae	native	-
<i>Eriogonum heracleoides</i> var. <i>heracleoides</i>	Parsnip flowered buckwheat	Polygonaceae	native	-
<i>Eriogonum microthecum</i> var. <i>ambiguum</i>	Obscure buckwheat	Polygonaceae	native	-
<i>Eriogonum microthecum</i> var. <i>laxiflorum</i>	Bush eriogonum	Polygonaceae	native	-
<i>Eriogonum nudum</i> var. <i>nudum</i>	Nude buckwheat	Polygonaceae	native	-
<i>Eriogonum nudum</i> var. <i>pubiflorum</i>	Hairy flowered buckwheat	Polygonaceae	native	-
<i>Eriogonum sphaerocephalum</i>	Round headed buckwheat	Polygonaceae	native	-
<i>Eriogonum sphaerocephalum</i> var. <i>sphaerocephalum</i>	Round headed buckwheat	Polygonaceae	native	-
<i>Eriogonum strictum</i> var. <i>anserinum</i>	Blue mountain buckwheat	Polygonaceae	native	-
<i>Eriogonum umbellatum</i> var. <i>dumosum</i>	Many flowered sulfur flower	Polygonaceae	native	-
<i>Eriogonum umbellatum</i> var. <i>modocense</i>	Sulphur flower buckwheat	Polygonaceae	native	-
<i>Eriogonum vimineum</i>	Wicker stemmed eriogonum	Polygonaceae	native	-
<i>Eriophyllum lanatum</i>	Wooly sunflower	Asteraceae	native	-
<i>Eriophyllum lanatum</i> var. <i>achilleoides</i>	Yarrow leaved woolly sunflower	Asteraceae	native	-
<i>Eriophyllum lanatum</i> var. <i>integrifolium</i>	Oregon sunshine	Asteraceae	native	-

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<i>Erodium cicutarium</i>	Coastal heron's bill	Geraniaceae	non-native (invasive)	-
<i>Erythranthe inflatula</i>	Ephemeral monkeyflower	Phrymaceae	native	-
<i>Festuca bromoides</i>	Brome fescue	Poaceae	non-native	FAC
<i>Festuca octoflora</i>	Sixweeks grass	Poaceae	native	UPL
<i>Festuca pratensis</i>	Meadow fescue	Poaceae	non-native	FACU
<i>Frasera albicaulis</i> var. <i>modocensis</i>	Modoc fraseria	Gentianaceae	native	-
<i>Fritillaria atropurpurea</i>	Spotted mountain bells	Liliaceae	native	-
<i>Galium aparine</i>	Cleavers	Rubiaceae	native	FACU
<i>Gayophytum humile</i>	Dwarf groundsmoke	Onagraceae	native	FAC
<i>Gayophytum ramosissimum</i>	Pinyon gayophytum	Onagraceae	native	-
<i>Geum triflorum</i> var. <i>ciliatum</i>	Prairie-smoke	Rosaceae	native	FACU
<i>Gilia salticola</i>	Granite gilia	Polemoniaceae	native	-
<i>Gnaphalium palustre</i>	Lowland cudweed	Asteraceae	native	FACW
<i>Gratiola ebracteata</i>	Common hedge hyssop	Plantaginaceae	native	OBL
<i>Gratiola heterosepala</i>	Boggs lake hedge hyssop	Plantaginaceae	native	OBL
<i>Grayia spinosa</i>	Hop sage	Chenopodiaceae	native	-
<i>Grindelia nana</i>	Idaho gumweed	Asteraceae	native	FACW
<i>Grindelia</i> sp.	-	Asteraceae	-	-
<i>Grindelia squarrosa</i> var. <i>serrulata</i>	Curlycup gumweed	Asteraceae	non-native	FACU
<i>Hackelia cusickii</i>	Cusick stickweed	Boraginaceae	native	-
<i>Halogeton glomeratus</i>	Halogeton	Chenopodiaceae	non-native (invasive)	-
<i>Helianthus annuus</i>	Hairy leaved sunflower	Asteraceae	native	FACU
<i>Helianthus cusickii</i>	Cusick's sunflower	Asteraceae	native	-
<i>Hemizonella minima</i>	Opposite leaved tarweed	Asteraceae	native	-
<i>Hesperochiron californicus</i>	California hesperochiron	Boraginaceae	native	FACU
<i>Hesperolinon micranthum</i>	Small flower western flax	Linaceae	native	-
<i>Heterocodon rariflorum</i>	Heterocodon	Campanulaceae	native	FACW
<i>Holosteum umbellatum</i> ssp. <i>umbellatum</i>	Jagged chickweed	Caryophyllaceae	non-native	-
<i>Hordeum brachyantherum</i>	Meadow barley	Poaceae	native	FACW
<i>Hordeum jubatum</i> ssp. <i>jubatum</i>	Foxtail barley, squirreltail barley	Poaceae	native	FAC

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<i>Hordeum murinum</i> ssp. <i>murinum</i>	Wall barley	Poaceae	non-native	FACU
<i>Hydrophyllum</i> sp.	-	Boraginaceae	-	-
<i>Hymenoxys lemmonii</i>	Lemmon's goldflower	Asteraceae	native	-
<i>Hypericum perforatum</i> ssp. <i>perforatum</i>	Klamathweed	Hypericaceae	non-native	FACU
<i>Isatis tinctoria</i>	Dyers woad	Brassicaceae	non-native (invasive)	-
<i>Isoetes</i> sp.	-	Isoetaceae	-	-
<i>Iva axillaris</i>	Povertyweed	Asteraceae	native	FAC
<i>Juncus balticus</i> ssp. <i>ater</i>	Baltic rush	Juncaceae	native	FACW
<i>Juncus bufonius</i>	Common toad rush	Juncaceae	native	FACW
<i>Juncus effuses</i>	Soft rush	Juncaceae	Native	FACW
<i>Juncus hemiendytus</i> var. <i>abjectus</i>	Center basin rush	Juncaceae	native	OBL
<i>Juncus leiospermus</i> var. <i>leiospermus</i>	Red bluff dwarf rush	Juncaceae	native	OBL
<i>Juncus nevadensis</i>	Sierra rush	Juncaceae	native	FACW
<i>Juncus tenuis</i>	Slender rush	Juncaceae	native	FACW
<i>Juncus tiehmii</i>	Tiehm's rush	Juncaceae	native	FACW
<i>Juniperus occidentalis</i>	Western juniper	Cupressaceae	native	-
<i>Koeleria macrantha</i>	June grass	Poaceae	native	-
<i>Lactuca serriola</i>	Prickly lettuce	Asteraceae	non-native (invasive)	FACU
<i>Lactuca</i> sp.	-	Asteraceae	-	-
<i>Lagophylla ramosissima</i>	Common hareleaf	Asteraceae	native	-
<i>Lathyrus jepsonii</i> var. <i>californicus</i>	California tule pea	Fabaceae	native	OBL
<i>Lathyrus lanszwertii</i> var. <i>lanszwertii</i>	Nevada pea	Fabaceae	native	UPL
<i>Lathyrus rigidus</i>	Rigid pea	Fabaceae	native	-
<i>Lepidium draba</i>	Whitetop	Brassicaceae	non-native (invasive)	-
<i>Lepidium latifolium</i>	Perennial pepperweed	Brassicaceae	non-native (invasive)	FAC
<i>Lepidium perfoliatum</i>	Klamath pepper grass	Brassicaceae	non-native	FACU
<i>Lewisia rediviva</i>	Bitter root	Montiaceae	native	-
<i>Linum lewisii</i> var. <i>lewisii</i>	Lewis' flax	Linaceae	native	-
<i>Lithophragma glabrum</i>	Bulbed woodland star	Saxifragaceae	native	-
<i>Lithospermum ruderales</i>	Western gromwell	Boraginaceae	native	-



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<i>Lomatium canbyi</i>	Canby's lomatium	Apiaceae	native	-
<i>Lomatium grayi</i>	Gray's lomatium	Apiaceae	native	-
<i>Lomatium hendersonii</i>	Henderson's lomatium	Apiaceae	native	-
<i>Lomatium macrocarpum</i>	Large fruited lomatium	Apiaceae	native	-
<i>Lomatium nudicaule</i>	Pestle lomatium	Apiaceae	native	UPL
<i>Lomatium ravenii</i>	Raven's lomatium	Apiaceae	native	-
<i>Lomatium ravenii</i> var. <i>ravenii</i>	Raven's lomatium	Apiaceae	native	-
<i>Lomatium roseanum</i>	Biscuitroot	Apiaceae	native	-
<i>Lomatium triternatum</i>	Lewis's lomatium	Apiaceae	native	-
<i>Lomatium vaginatum</i>	Sheathed lomatium	Apiaceae	native	-
<i>Lotus corniculatus</i>	Bird's foot trefoil	Fabaceae	non-native (invasive)	FAC
<i>Lupinus arbustus</i>	Long spurred lupine	Fabaceae	native	-
<i>Lupinus argenteus</i> var. <i>argenteus</i>	Silvery lupine	Fabaceae	native	-
<i>Lupinus argenteus</i> var. <i>heteranthus</i>	Silvery lupine	Fabaceae	native	-
<i>Lupinus brevicaulis</i>	Short stemmed blue lupine	Fabaceae	native	-
<i>Lupinus latifolius</i> var. <i>barbatus</i>	Hair tuft lupine	Fabaceae	native	FACW
<i>Lupinus lepidus</i> var. <i>confertus</i>	Clustered tidy lupine	Fabaceae	native	-
<i>Lupinus microcarpus</i>	Chick lupine	Fabaceae	native	-
<i>Lupinus pusillus</i> var. <i>intermontanus</i>	Intermountain lupine	Fabaceae	native	-
<i>Lupinus saxosus</i>	Rock lupine	Fabaceae	native	-
<i>Madia citriodora</i>	Lemon scented tarweed	Asteraceae	native	-
<i>Madia glomerata</i>	Mountain tarweed	Asteraceae	native	FACU
<i>Matricaria discoidea</i>	Pineapple weed	Asteraceae	native	FACU
<i>Melica bulbosa</i>	Oniongrass	Poaceae	native	FACU
<i>Melilotus officinalis</i>	Yellow sweetclover	Fabaceae	non-native (invasive)	FACU
<i>Mentzelia albicaulis</i>	White stemmed blazing star	Loasaceae	native	-
<i>Mentzelia</i> sp.	-	Loasaceae	-	-
<i>Mertensia ciliata</i> var. <i>stomatechoides</i>	Streamside bluebells	Boraginaceae	native	FACW
<i>Mertensia oblongifolia</i> var. <i>nevadensis</i>	Sagebrush bluebells	Boraginaceae	native	FAC

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<i>Mertensia oblongifolia</i> var. <i>oblongifolia</i>	Sagebrush bluebells	Boraginaceae	native	FAC
<i>Micranthes aprica</i>	Sierra saxifrage	Saxifragaceae	native	FACW
<i>Micranthes bryophora</i>	Bud saxifrage	Saxifragaceae	native	-
<i>Microseris laciniata</i> ssp. <i>laciniata</i>	Cut leaved scorzonella	Asteraceae	native	FACU
<i>Microsteris gracilis</i>	Slender phlox	Polemoniaceae	native	FACU
<i>Mimulus evanescens</i>	Disappearing monkeyflower	Phrymaceae	native	-
<i>Mimulus guttatus</i>	Yellow monkeyflower	Phrymaceae	native	OBL
<i>Mimulus pilosus</i>	Snouted monkeyflower	Phrymaceae	native	FACW
<i>Mimulus pulsiferae</i>	Candelabrum monkeyflower	Phrymaceae	native	-
<i>Mimulus suksdorfii</i>	Suksdorf's monkeyflower	Phrymaceae	native	FACU
<i>Monardella odoratissima</i>	Mountain monardella	Lamiaceae	native	FACU
<i>Monardella odoratissima</i> ssp. <i>glauc</i>	Follett's monardella	Lamiaceae	native	FACU
<i>Montia chamissoi</i>	Spring beauty	Montiaceae	native	OBL
<i>Montia fontana</i>	Water montia	Montiaceae	native	OBL
<i>Montia linearis</i>	Narrow leaved water chickweed	Montiaceae	native	FAC
<i>Muhlenbergia asperifolia</i>	Scratchgrass	Poaceae	native	FACW
<i>Muhlenbergia richardsonis</i>	Richardson's muhly	Poaceae	native	FAC
<i>Muilla transmontana</i>	Great basin muilla	Themidaceae	native	-
<i>Myosurus apetalus</i> var. <i>borealis</i>	Bristly mousetail	Ranunculaceae	native	OBL
<i>Myosurus minimus</i>	Little mousetail	Ranunculaceae	native	OBL
<i>Nama aretioides</i>	Purple nama	Boraginaceae	native	-
<i>Navarretia breweri</i>	Brewer's navarretia	Polemoniaceae	native	FAC
<i>Navarretia divaricata</i> ssp. <i>vividior</i>	Mountain navarretia	Polemoniaceae	native	-
<i>Navarretia intertexta</i>	Interwoven navarretia	Polemoniaceae	native	FACW
<i>Navarretia leucocephala</i> ssp. <i>leucocephala</i>	White headed navarretia	Polemoniaceae	native	OBL
<i>Navarretia sinistra</i>	Alva day's pincushionplant	Polemoniaceae	native	-
<i>Nemophila pedunculata</i>	Meadow nemophila	Boraginaceae	native	FAC
<i>Neoholmgrenia andina</i>	Plateau evening primrose	Onagraceae	native	UPL
<i>Nepeta cataria</i>	Catnip	Lamiaceae	non-native	FACU
<i>Nitrophila occidentalis</i>	Western nitrophila	Amaranthaceae	native	FACW

Scientific Name	Common Name	Family	Origin	Wetland Status (AW 2016)
<i>Onopordum acanthium</i> ssp. <i>acanthium</i>	Scottish thistle	Asteraceae	non-native (invasive)	-
<i>Orobanche corymbosa</i>	Flat topped broomrape	Orobanchaceae	native	-
<i>Orobanche fasciculata</i>	Pinyon broomrape	Orobanchaceae	native	-
<i>Packera cana</i>	Woolly groundsel	Asteraceae	native	-
<i>Packera eurycephala</i>	Widehead groundsel	Asteraceae	native	-
<i>Paeonia brownii</i>	Peony	Paeoniaceae	native	-
<i>Panicum acuminatum</i>	Western witchgrass	Poaceae	native	FAC
<i>Pedicularis centranthera</i>	Dwarf lousewort	Orobanchaceae	native	-
<i>Penstemon deustus</i>	Rock penstemon	Plantaginaceae	native	-
<i>Penstemon roezlii</i>	Regel's mountain penstemon	Plantaginaceae	native	-
<i>Penstemon rydbergii</i> var. <i>oreocharis</i>	Meadow beardtongue	Plantaginaceae	native	FACU
<i>Penstemon speciosus</i>	Showy penstemon	Plantaginaceae	native	-
<i>Penstemon sudans</i>	Volcanic beardtongue	Plantaginaceae	native	-
<i>Peraphyllum ramosissimum</i>	Wild crab apple	Rosaceae	native	-
<i>Perideridia bolanderi</i> ssp. <i>bolanderi</i>	Bolander's yampah	Apiaceae	native	-
<i>Phacelia adenophora</i>	Glandular yellow phacelia	Boraginaceae	native	-
<i>Phacelia bicolor</i>	Twocolor phacelia	Boraginaceae	native	-
<i>Phacelia heterophylla</i> var. <i>virgata</i>	Varied leaf phacelia	Boraginaceae	native	FACU
<i>Phacelia humilis</i>	Low phacelia	Boraginaceae	native	-
<i>Phacelia humilis</i> var. <i>humilis</i>	Low phacelia	Boraginaceae	native	-
<i>Phacelia insularis</i>	Santa Rosa island phacelia	Boraginaceae	native	-
<i>Phacelia linearis</i>	Thread leaf phacelia	Boraginaceae	native	-
<i>Phacelia ramosissima</i>	Branching phacelia	Boraginaceae	native	FACU
<i>Phacelia thermalis</i>	Heat phacelia	Boraginaceae	native	-
<i>Phalaris arundinacea</i>	Reed canarygrass	Poaceae	native	FACW
<i>Phleum pratense</i>	Common timothy	Poaceae	non-native	FACU
<i>Phlox hoodii</i> ssp. <i>canescens</i>	Hood's phlox	Polemoniaceae	native	-
<i>Phlox stansburyi</i>	Cold desert phlox	Polemoniaceae	native	-
<i>Phoenicaulis cheiranthoides</i>	Dagger pod	Brassicaceae	native	-

Scientific Name	Common Name	Family	Origin	Wetland Status (AW 2016)
<i>Phoradendron juniperinum</i>	Mistletoe	Viscaceae	native	-
<i>Phragmites australis</i>	Common reed	Poaceae	native	FACW
<i>Pinus jeffreyi</i>	Jeffrey pine	Pinaceae	native	-
<i>Pinus ponderosa</i>	Yellow pine	Pinaceae	native	FACU
<i>Plagiobothrys kingii</i>	Great basin popcornflower	Boraginaceae	native	-
<i>Plagiobothrys leptocladus</i>	Alkali plagiobothrys	Boraginaceae	native	OBL
<i>Plagiobothrys tenellus</i>	Slender popcornflower	Boraginaceae	native	FACU
<i>Plantago lanceolata</i>	Ribwort	Plantaginaceae	non-native (invasive)	FAC
<i>Plantago major</i>	Common plantain	Plantaginaceae	non-native	FAC
<i>Platanthera dilatata</i> var. <i>leucostachys</i>	Sierra bog orchid	Orchidaceae	native	FACW
<i>Plectritis ciliosa</i>	Long spurred plectritis	Valerianaceae	native	FACU
<i>Plectritis macrocera</i>	Plectritis	Valerianaceae	native	FACU
<i>Pleiocanthus spinosus</i>	Thorn skeletonweed	Asteraceae	native	-
<i>Poa bulbosa</i>	Bulbous bluegrass	Poaceae	non-native	FACU
<i>Poa cusickii</i> ssp. <i>cusickii</i>	Cusick's bluegrass	Poaceae	native	-
<i>Poa pratensis</i> ssp. <i>pratensis</i>	Kentucky bluegrass	Poaceae	non-native (invasive)	FAC
<i>Poa secunda</i>	Pine bluegrass	Poaceae	native	FACU
<i>Poa secunda</i> ssp. <i>juncifolia</i>	Rush bluegrass	Poaceae	native	FACU
<i>Poa secunda</i> ssp. <i>secunda</i>	Sandberg's bluegrass	Poaceae	native	FACU
<i>Polemonium micranthum</i>	Annual sky pilot	Polemoniaceae	native	FACU
<i>Polyctenium fremontii</i>	Fremont's polyctenium	Brassicaceae	native	FAC
<i>Polyctenium fremontii</i> var. <i>fremontii</i>	Fremont's polyctenium	Brassicaceae	native	FAC
<i>Polygala subspinoso</i>	Spiny milkwort	Polygonaceae	native	-
<i>Polygonum aviculare</i> ssp. <i>depressum</i>	Prostrate knotweed	Polygonaceae	non-native	FAC
<i>Polygonum aviculare</i> ssp. <i>rurivagum</i>	Prostrate knotweed	Polygonaceae	non-native	FAC
<i>Polygonum polygaloides</i> ssp. <i>esotericum</i>	Modoc county knotweed	Polygonaceae	native	FACW
<i>Polygonum polygaloides</i> ssp. <i>kelloggii</i>	Kellogg's knotweed	Polygonaceae	native	FACW
<i>Polygonum sawatchense</i> ssp. <i>sawatchense</i>	-	Polygonaceae	native	FACU

Scientific Name	Common Name	Family	Origin	Wetland Status (AW 2016)
<i>Polypogon monspeliensis</i>	Annual beardgrass	Poaceae	non-native (invasive)	FACW
<i>Populus nigra</i>	Lombardy poplar	Salicaceae	non-native	-
<i>Populus</i> sp.	-	Salicaceae	-	-
<i>Populus tremuloides</i>	Quaking aspen	Salicaceae	native	FACU
<i>Potentilla biennis</i>	Biennial cinquefoil	Rosaceae	native	FACW
<i>Potentilla gracilis</i>	Northwest cinquefoil	Rosaceae	native	FAC
<i>Potentilla gracilis</i> var. <i>fastigiata</i>	Slender cinquefoil	Rosaceae	native	FAC
<i>Potentilla gracilis</i> var. <i>flabelliformis</i>	Cupform leaf cinquefoil	Rosaceae	native	FAC
<i>Poterium sanguisorba</i>	Garden burnet	Rosaceae	non-native	FACU
<i>Primula conjugens</i>	Bonneville shooting star	Primulaceae	native	FACU
<i>Prunus andersonii</i>	Desert peach	Rosaceae	native	-
<i>Prunus emarginata</i>	Bitter cherry	Rosaceae	native	FACU
<i>Prunus subcordata</i>	Sierra plum	Rosaceae	native	-
<i>Prunus virginiana</i> var. <i>demissa</i>	Western choke cherry	Rosaceae	native	FAC
<i>Psilocarphus oregonus</i>	Woolly marbles	Asteraceae	native	OBL
<i>Puccinellia nuttalliana</i>	Nuttall's alkali grass	Poaceae	native	FACW
<i>Purshia tridentata</i>	Antelope bush	Rosaceae	native	-
<i>Pyrrocoma lanceolata</i>	Intermountain pyrrocoma	Asteraceae	native	FAC
<i>Quercus kelloggii</i>	California black oak	Fagaceae	native	-
<i>Ranunculus californicus</i>	Common buttercup	Ranunculaceae	native	FACU
<i>Ranunculus glaberrimus</i> var. <i>glaberrimus</i>	Smooth buttercup	Ranunculaceae	native	FAC
<i>Ranunculus occidentalis</i> var. <i>dissectus</i>	Western buttercup	Ranunculaceae	native	FAC
<i>Ranunculus sceleratus</i>	Cursed crowfoot	Ranunculaceae	native	OBL
<i>Ranunculus testiculatus</i>	Tubercled crowfoot	Ranunculaceae	non-native	-
<i>Ribes aureum</i>	Golden currant	Grossulariaceae	native	FAC
<i>Ribes velutinum</i>	Desert gooseberry	Grossulariaceae	native	-
<i>Ribes viscosissimum</i>	Sticky current	Grossulariaceae	native	FAC
<i>Rigiopappus leptocladus</i>	Wire weed	Asteraceae	native	-
<i>Robinia pseudoacacia</i>	Black locust	Fabaceae	non-native (invasive)	FACU
<i>Rosa woodsii</i>	Woods' rose	Rosaceae	native	FACU
<i>Rosa woodsii</i> ssp. <i>ultramontana</i>	Interior rose	Rosaceae	native	FACU

Scientific Name	Common Name	Family	Origin	Wetland Status (AW 2016)
<i>Rumex acetosella</i>	Sheep sorrel	Polygonaceae	non-native (invasive)	FACU
<i>Rumex crispus</i>	Curly dock	Polygonaceae	non-native (invasive)	FAC
<i>Rumex lacustris</i>	Lake dock	Polygonaceae	native	OBL
<i>Rumex triangulivalvis</i>	Willow dock	Polygonaceae	native	FACW
<i>Rumex venosus</i>	Winged dock	Polygonaceae	native	UPL
<i>Salix exigua</i>	Narrowleaf willow	Salicaceae	native	FACW
<i>Salix lasiandra</i>	Pacific willow	Salicaceae	native	FACW
<i>Salix lasiandra</i> var. <i>caudata</i>	Shining willow	Salicaceae	native	FACW
<i>Salix lasiolepis</i>	Arroyo willow	Salicaceae	native	FACW
<i>Salix lutea</i>	Yellow willow	Salicaceae	native	OBL
<i>Salsola tragus</i>	Russian thistle	Chenopodiaceae	non-native (invasive)	FACU
<i>Salvia aethiopis</i>	Mediterranean sage	Lamiaceae	non-native (invasive)	-
<i>Salvia dorrii</i> var. <i>dorrii</i>	Dorr's sage	Lamiaceae	native	-
<i>Sambucus nigra</i> ssp. <i>caerulea</i>	Blue elderberry	Adoxaceae	native	FAC
<i>Sarcobatus vermiculatus</i>	Greasewood	Sarcobataceae	native	FACU
<i>Schoenoplectus acutus</i> var. <i>occidentalis</i>	Tule	Cyperaceae	native	OBL
<i>Schoenoplectus americanus</i>	Chairmaker's bulrush	Cyperaceae	native	OBL
<i>Schoenoplectus</i> sp.	-	Cyperaceae	-	-
<i>Scirpus microcarpus</i>	Mountain bog bulrush	Cyperaceae	native	OBL
<i>Scrophularia californica</i>	California bee plant	Scrophulariaceae	native	FAC
<i>Scrophularia desertorum</i>	Desert figwort	Scrophulariaceae	native	-
<i>Scutellaria nana</i>	Little skullcap	Lamiaceae	native	-
<i>Secale cereale</i>	Rye	Poaceae	non-native	-
<i>Senecio hydrophiloides</i>	Sweet marsh ragwort	Asteraceae	native	FACW
<i>Senecio integerrimus</i>	Mountain butterweed	Asteraceae	native	FACU
<i>Senecio integerrimus</i> var. <i>exaltatus</i>	Columbia mountain butterweed	Asteraceae	native	FACU
<i>Senecio serra</i> var. <i>serra</i>	Tall ragwort	Asteraceae	native	FACU
<i>Sidalcea glaucescens</i>	Glaucous checker mallow	Malvaceae	native	-
<i>Sidalcea oregana</i>	Oregon checker mallow	Malvaceae	native	FACW
<i>Silene lemmonii</i>	Lemmon's catchfly	Caryophyllaceae	native	-
<i>Sisymbrium altissimum</i>	Tumble mustard	Brassicaceae	non-native	FACU

Scientific Name	Common Name	Family	Origin	Wetland Status (AW 2016)
<i>Sisymbrium orientale</i>	Indian hedge mustard	Brassicaceae	non-native	-
<i>Solidago elongata</i>	West Coast Canada goldenrod	Asteraceae	native	FACU
<i>Spirodela polyrhiza</i>	Giant duckmeat	Araceae	native	OBL
<i>Sporobolus cryptandrus</i>	Sand dropseed	Poaceae	native	FACU
<i>Stanleya viridiflora</i>	Green flowered prince's plume	Brassicaceae	native	-
<i>Stenotus acaulis</i>	Stemless mock goldenweed	Asteraceae	native	-
<i>Stenotus lanuginosus</i> var. <i>lanuginosus</i>	Woolly stenotus	Asteraceae	native	-
<i>Stipa comata</i>	Needle-and-thread	Poaceae	native	-
<i>Stipa hymenoides</i>	Indian rice grass	Poaceae	native	UPL
<i>Stipa lemmonii</i>	Lemmon's needle grass	Poaceae	native	-
<i>Stipa nelsonii</i> var. <i>dorei</i>	Mountain needle grass	Poaceae	native	FACU
<i>Stipa occidentalis</i>	Western needlegrass	Poaceae	native	-
<i>Stipa occidentalis</i> var. <i>pubescens</i>	Common western needle grass	Poaceae	native	-
<i>Stipa thurberiana</i>	Thurber's needle grass	Poaceae	native	-
<i>Streptanthus cordatus</i> var. <i>cordatus</i>	Heartleaf jewelflower	Brassicaceae	native	-
<i>Suaeda calceoliformis</i>	Horned sea blite	Chenopodiaceae	native	FACW
<i>Symphoricarpos longiflorus</i>	Desert snowberry	Caprifoliaceae	native	-
<i>Symphoricarpos rotundifolius</i>	Mountain snowberry	Caprifoliaceae	native	-
<i>Symphyotrichum spathulatum</i>	Western mountain aster	Asteraceae	native	FAC
<i>Taraxacum officinale</i>	Red seeded dandelion	Asteraceae	non-native (invasive)	FACU
<i>Taraxia subacaulis</i>	Long leaved suncup	Onagraceae	native	FACW
<i>Taraxia tanacetifolia</i>	Tansy leaf evening primrose	Onagraceae	native	FACU
<i>Tetradymia canescens</i>	Gray horsebrush	Asteraceae	native	-
<i>Tetradymia glabrata</i>	Little leaf horsebrush	Asteraceae	native	-
<i>Tetradymia spinosa</i>	Spiny horsebrush	Asteraceae	native	-
<i>Thelypodium flexuosum</i>	Nodding thelypodium	Brassicaceae	native	-
<i>Thlaspi arvense</i>	Fan weed	Brassicaceae	non-native	UPL
<i>Tiquilia nuttallii</i>	Nuttall's coldenia	Boraginaceae	native	UPL
<i>Toxicoscordion paniculatum</i>	Foothill deathcamas	Melanthiaceae	native	-

Scientific Name	Common Name	Family	Origin	Wetland Status (AW 2016)
<i>Toxicoscordion venenosum</i> var. <i>venenosum</i>	Meadow deathcamas	Melanthiaceae	native	FACU
<i>Tragopogon dubius</i>	Goat's beard	Asteraceae	non-native (invasive)	-
<i>Tragopogon porrifolius</i>	Salsify	Asteraceae	non-native	-
<i>Tribulus terrestris</i>	Puncture vine	Zygophyllaceae	non-native (invasive)	-
<i>Trifolium cyathiferum</i>	Cup clover	Fabaceae	native	FAC
<i>Trifolium gymnocarpon</i> ssp. <i>plummerae</i>	Plummer's clover	Fabaceae	native	-
<i>Trifolium hybridum</i>	Alsike clover	Fabaceae	non-native	FAC
<i>Trifolium macrocephalum</i>	Big headed clover	Fabaceae	native	FACU
<i>Trifolium microcephalum</i>	Small head clover	Fabaceae	native	FAC
<i>Trifolium variegatum</i>	Variegated clover	Fabaceae	native	FAC
<i>Trifolium willdenovii</i>	Tomcat clover	Fabaceae	native	FACW
<i>Triglochin maritima</i>	Seaside arrowgrass	Juncaginaceae	native	OBL
<i>Triticum aestivum</i>	Common wheat	Poaceae	non-native	-
<i>Typha angustifolia</i>	Narrow leaf cattail	Typhaceae	non-native	OBL
<i>Typha latifolia</i>	Boradleaf cattail	Typhaceae	native	OBL
<i>Ulmus pumila</i>	Siberian elm	Ulmaceae	non-native (invasive)	UPL
<i>Urtica dioica</i> ssp. <i>holosericea</i>	Stinging nettle	Urticaceae	native	FAC
<i>Ventenata dubia</i>	Ventenata grass	Poaceae	non-native	-
<i>Veratrum californicum</i> var. <i>californicum</i>	California corn lily	Melanthiaceae	native	FACW
<i>Verbascum blattaria</i>	Moth mullein	Scrophulariaceae	non-native	UPL
<i>Verbascum thapsus</i>	Woolly mullein	Scrophulariaceae	non-native (invasive)	FACU
<i>Verbena bracteata</i>	Bracted verbena	Verbenaceae	native	FAC
<i>Veronica americana</i>	American brooklime	Plantaginaceae	native	OBL
<i>Veronica anagallis-aquatica</i>	Water speedwell	Plantaginaceae	non-native	OBL
<i>Veronica arvensis</i>	Speedwell	Plantaginaceae	non-native	FACU
<i>Veronica peregrina</i> ssp. <i>xalapensis</i>	Speedwell	Plantaginaceae	native	FAC
<i>Veronica scutellata</i>	Marsh speedwell	Plantaginaceae	native	OBL
<i>Vicia americana</i> ssp. <i>americana</i>	American vetch	Fabaceae	native	FAC
<i>Viola beckwithii</i>	Great basin violet	Violaceae	native	-



Scientific Name	Common Name	Family	Origin	Wetland Status (AW 2016)
<i>Viola praemorsa</i>	Astoria violet	Violaceae	native	-
<i>Viola praemorsa</i> ssp. <i>linguifolia</i>	Astoria violet	Violaceae	native	-
<i>Viola purpurea</i> ssp. <i>aurea</i>	Golden violet	Violaceae	native	-
<i>Viola purpurea</i> ssp. <i>quercetorum</i>	Goosefoot yellow violet	Violaceae	native	-
<i>Vitis californica</i>	California wild grape	Vitaceae	native	FACU
<i>Wyethia mollis</i>	Woolly mule's ears	Asteraceae	native	-
<i>Xanthium strumarium</i>	Cocklebur	Asteraceae	native	FAC
<i>Zannichellia palustris</i>	Horned pondweed	Zannichelliaceae	native	OBL

Notes:

FAC = Facultative

FACU = Facultative Upland

FACW = Facultative Wet

OBL = Obligate



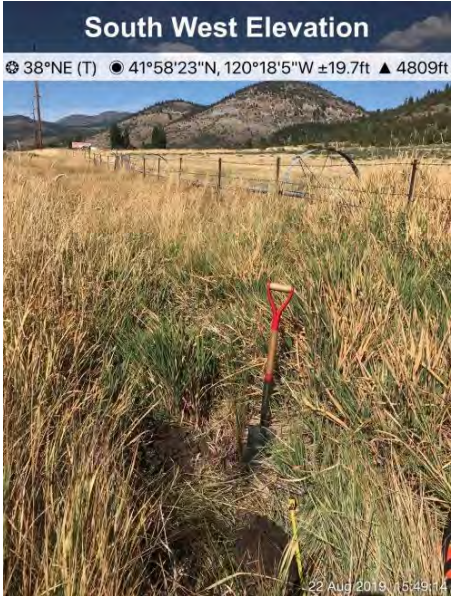

UPL = Upland

# **APPENDIX F**





## **REPRESENTATIVE PHOTOGRAPHS**

## Segment 1

The following photos are documentation of conditions within the study area during the field delineation conducted from August 2019 to May 2020.

	
<p>Photo 1. Intermittent stream (D50-1bx, 50-1) with a break in bank slope and change in vegetation cover indicating the ordinary high water mark (OHWM).</p>	<p>Photo 2. Intermittent stream (D51-bx, 51-1) with OHWM same as top of bank (TOB).</p>
	
<p>Photo 3. Fresh emergent wetland (W50-1, 52-1) dominated by <i>Carex</i> sp.</p>	<p>Photo. 4 Upland (U50-, 53-1) adjacent to fresh emergent wetland dominated by perennial grasses.</p>



	
<p>Photo 5. Riparian wetland (W1-1x, 3-1x) adjacent to highway 395 dominated by <i>Salix</i> sp.</p>	<p>Photo 6. Upland (U1-1x, 4-1x) adjacent to riparian wetland dominated by perennial grasses.</p>
	
<p>Photo 7. Intermittent stream (D3-1x, 5-x) with TOB the same as OHWM.</p>	<p>Photo 8. Intermittent stream (D4-1x, 6-1x) with TOB the same as OHWM.</p>



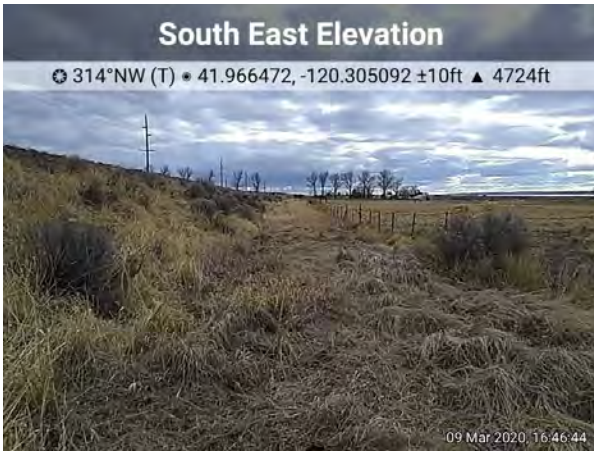


Photo 9. Non-wetland (NW1-1x, 7-1x) across highway from wetland. Suspect area confirmed as upland.



Photo 10. Perennial stream (D5-1x, D8-1x) dominated by *Carex* sp.



Photo 11. Intermittent stream (D07-1bx, 15-1) with a break in bank slope and change in vegetation cover indicating the OHWM.



Photo 12. Intermittent stream (D7-1x, 10-1) with a break in bank slope and change in vegetation cover indicating the OHWM.





Photo 13. Perennial Stream (D06-1, 14-1) dominated by *Carex* sp.



Photo 14. Intermittent stream (D05-1bx, 11-1) with TOB the same as OHWM.



Photo 15. Riparian wetland (W06-1, 12-1) with sub-surface water and dominated by *Carex* sp.



Photo 16. Upland (U06-1, 13-1) adjacent to riparian wetland dominated by perennial grasses.





Photo 17. Intermittent stream (D04-1bx, 10-1) with break in bank slope indicating OHWM.



Photo 18. Non-vegetated ditch (D11-1x, 14-1x) with TOB the same as OHWM.



Photo 19. Riparian and fresh emergent wetland complex (W04-1c, 08-1) dominated by *Carex* sp.



Photo 20. Upland (U04-1, 09-1) adjacent to riparian wetland dominated by perennial grasses.





Photo 21. Intermittent stream (D12-1x, 15-1x) with break in bank slope and change in vegetation cover indicating OHWM.



Photo 22. Perennial stream (D03-1, 7-1) with TOB the same as OHWM.



Photo 23. Intermittent stream (D016-1x, 19-1) with TOB the same as OHWM.



Photo 24. Intermittent stream (D017-1x, 20-1x) with break in bank slope and change in vegetation cover indicating OHWM.



	
<p>Photo 25. Intermittent stream (D018-1x, 21-1x) with TOB the same as OHWM.</p>	<p>Photo 26. Ephemeral stream (D52-1, 54-1) with break in bank slope and change in vegetation cover indicating OHWM.</p>
	
<p>Photo 27. Intermittent stream (D019-1x, 22-1x) with TOB the same as OHWM.</p>	<p>Photo 28. Intermittent stream (D53-1, 55-1x) with TOB the same as OHWM.</p>





Photo 29. Intermittent stream (D100-1x, 100-1x) with break in bank slope and change in vegetation cover indicating OHWM.



Photo 30. Perennial stream (D20-1x, 23-1x) with break in bank slope and change in vegetation cover indicating OHWM.



Photo 31. Perennial stream (D21-1x, 24-1x) with break in bank slope and change in vegetation cover indicating OHWM.



Photo 32. Perennial stream (D107-1, 115-1) with break in bank slope and change in vegetation cover indicating OHWM.





Photo 33. Small pond (D22-1x, 26-1x) adjacent to Highway 395.



Photo 34. Non-wetland (NW2-1x, 25-1x) in suspect area near small pond.



Photo 35. Seasonal wetland (W2-1x), 27-1x) with soil and hydrology wetland indicators but lacking wetland vegetation.



Photo 36. Upland (U2-1x), 28-1x) adjacent to seasonal wetland dominated by perennial grasses and sagebrush.





Photo 37. Intermittent stream (D106-1bx, 112-1) with break in bank slope and change in vegetation cover indicating OHWM.



Photo 38. Intermittent stream (D24-1x, 30-1) with TOB the same as OHWM.



Photo 39. Intermittent stream (D105-1, 111-1) with break in bank slope and change in vegetation cover indicating OHWM.



Photo 40. Intermittent stream (D104-1, 110-1) with TOB the same as OHWM.





Photo 41. Intermittent stream (D25-1x, 31-1x) with TOB the same as OHWM.



Photo 42. Wetland (W103-1, 113-1) fed by a seep or spring.



Photo 43. Upland (U103-1, 114-1) dominated by perennial grasses and sagebrush.



Photo 44. Ephemeral stream (D103-1, 109-1) with TOB the same as OHWM.





Photo 45. Ephemeral stream (D102-1, 108-1) with break in bank slope and change in vegetation cover indicating OHWM.



Photo 46. Ephemeral stream (D26-1x, 31-1x) with TOB the same as OHWM.



Photo 47. Ephemeral stream (D26-1x, 31-1x) with TOB the same as OHWM.



Photo 48. Wetland (W102-1, 106-1) created by a seep or spring.





Photo 49. Upland (U102-1, 107-1) adjacent to wetland created by a seep or spring dominated by perennial grasses.



Photo 50. Non-vegetated ditch (D101-1, 105-1) with TOB the same as OHWM.



Photo 51. Wetland (W101-1, 103-1) created by a seep or spring.



Photo 52. Upland (U101-1, 104-1) adjacent to wetland created by a seep or spring.



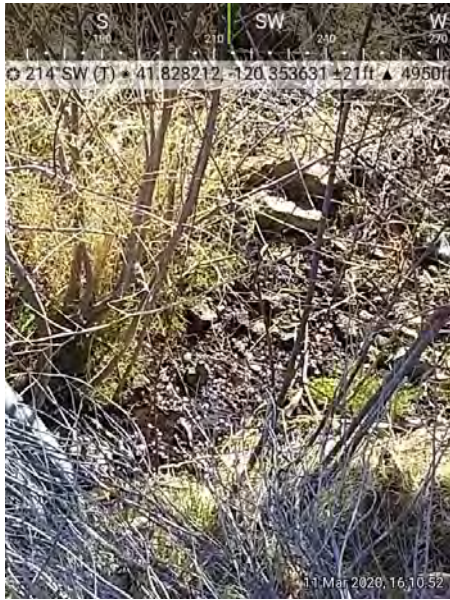


Photo 53. Intermittent stream (D27-1x, 33-1x) with break in bank slope and change in vegetation cover indicating OHWM.



Photo 54. Non-wetland (NW3-1x, 34-1x) with suspect riparian habitat confirmed as non-wetland.



Photo 55. Ephemeral stream (D100-1, 102-1) with break in bank slope and change in vegetation cover indicating OHWM.



Photo 56. Wetland swale (W3-1x, 36-1x) that turns into a drainage outside the survey area.





Photo 57. Upland (U3-1x, 37-1x) adjacent to wetland swale dominated by perennial grasses.



Photo 58. Wetland swale (W100-1, 100-1) dominated by *Carex* sp.



Photo 59. Upland (U100-1, 101-1) adjacent to wetland swale dominated by perennial grasses.



Photo 60. Swale/ fresh emergent wetland (W5-1x, 40-1x) with minimal vegetation cover.





Photo 61. Upland (U5-1x, 41-1) adjacent to emergent wetland dominated by perennial grasses.



Photo 62. Riparian/ fresh emergent wetland complex (W03-1, 04-1) dominated by *Salix* sp. and *Carex* sp.



Photo 63. Upland (U03-1, 05-1) adjacent to riparian/ fresh emergent wetland complex dominated by perennial grasses.



Photo 64. Seasonal wetland (W01-1, 02-1) dominated by *Carex* sp.





Photo 65. Upland (U01-1, 03-1) adjacent to seasonal wetland dominated by perennial grasses.



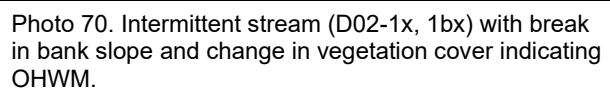
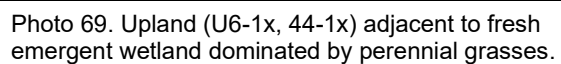
Photo 66. Non-wetland (NW5-1x, 42-1x) with suspect habitat confirmed as non-wetland.



Photo 67. Intermittent stream (D01-1, 01-1) with break in bank slope and change in vegetation cover indicating OHWM.



Photo 68. Fresh emergent wetland (W6-1x, 43-1x) situated within a swale.





## Segment 2

The following photos are documentation of conditions within the study area during the field delineation conducted from August 2019 to May 2020.





	
	
<p>Photo 1. Fresh emergent wetland (W64-2, 68-2) dominated by <i>Carex</i> sp.</p>	<p>Photo 2. Upland (U64-2, 69-2) adjacent to fresh emergent wetland and dominated by perennial grasses.</p>
<p>Photo 3. Fresh emergent wetland (W62-2, 66-2) appearing to be fed by nearby agricultural fields.</p>	<p>Photo 4. Upland (U62-2, 67-2) adjacent to fresh emergent wetland and dominated by perennial grasses.</p>





Photo 5. Fresh emergent wetland (W61-2, 64-2) appearing to be fed by nearby agricultural fields.



Photo 6. Upland (U61-2, 65-2) adjacent to fresh emergent wetland and dominated by perennial grasses.



Photo 7. Ephemeral stream (D54-2bx, 63-2) with TOB the same as OHWM.



Photo 8. Fresh emergent wetland (W117-2, 128-2) dominated by *Carex* sp.





Photo 9. Upland (U117-2, 129-2) adjacent to fresh emergent wetland on road slope.



Photo 10. Seasonal wetland (W1-2x, 3-2x) dominated by *Carex* sp.



Photo 11. Upland (U1-2x, 4-2) adjacent to seasonal wetland and dominated by perennial grasses.



Photo 12. Irrigation canal (D3-2x, 5-2x) used to divert stream for agricultural purposes.



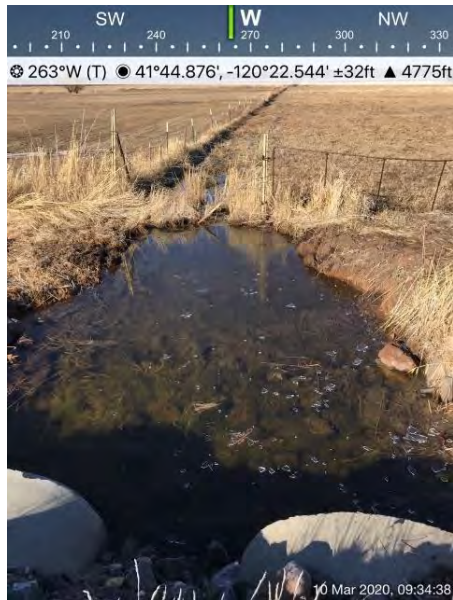


Photo 13. Irrigation canal (D5-2x, 7-2x) used to divert stream for agricultural purposes.



Photo 14. Perennial stream (D111-2bx, 127-2) with break in slope and change in vegetation cover indicating OHWM.



Photo 15. Perennial stream (D110-2bx, 126-2) with break in slope and change in vegetation cover indicating OHWM.



Photo 16. Non-wetland (NW1-2x, 10-2x) with suspect features confirmed as being upland.





Photo 17. Fresh emergent wetland (W115-2, 124-2) dominated by *Carex* sp.



Photo 18. Upland (U115-2, 125-2) with gravel fill material associated with roadway slope and dominated by perennial grasses.



Photo 19. Perennial stream (D108-2, 122-2) with OHWM the same as TOB.



Photo 20. Seasonal wetland (W3-2x, 13-2) dominated by *Carex* sp.





Photo 21. Upland (U3-2x, 14-2x) adjacent to seasonal wetland and dominated by perennial grasses.



Photo 22. Ephemeral stream (D9-2x, 12-2x) with TOB the same as OHWM.



Photo 23. Ephemeral stream (D107-2, 121-2) with TOB the same as OHWM.



Photo 24. Perennial stream (D106-2bx, 118-2) with break in slope and change in vegetation cover indicating OHWM.





Photo 25. Fresh emergent wetland (W112-2, 119-2) dominated by *Salix* sp. and *Carex* sp.



Photo 26. Upland (U112-2, 120-2) adjacent to fresh emergent wetland and dominated by perennial grasses.



Photo 27. Perennial stream (D105-2bx, 117-2) with break and bank slope and change in vegetation cover indicating OHWM.



Photo 28. Fresh emergent wetland (W4-2x, 17-2x) with hydrogen sulfide present in soils.





Photo 29. Upland (U4-2x, 18-2x) adjacent to fresh emergent wetland on road slope.



Photo 30. Perennial stream (D104-2, 116-2) with adjacent riparian wetland.



Photo 31. Fresh emergent wetland (W110-2, 114-2) dominated by *Carex* sp.



Photo 32. Upland (U110-2, 115-2) adjacent to fresh emergent wetland on road slope.





Photo 33. Intermittent stream (D12-2x, 19-2x) with break in slope and change in vegetation cover indicating OHWM.

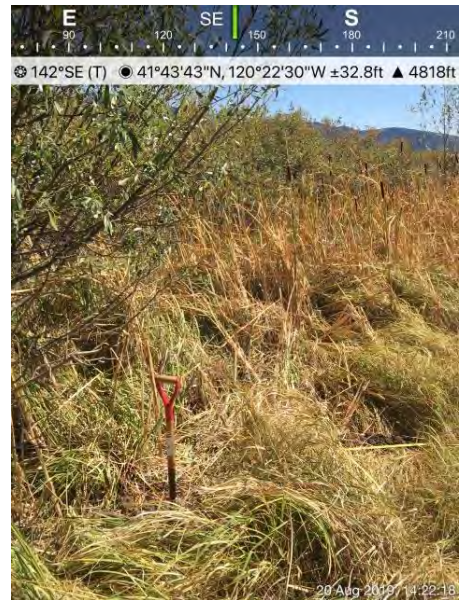


Photo 34. Fresh emergent wetland (W108-2, 112-2) dominated by *Carex* sp. and *Salix* sp.



Photo 35. Upland (U108-2, 113-2) adjacent to fresh emergent wetland and dominated by perennial grasses.



Photo 36. Intermittent stream (D13-2x, 113-2) with TOB the same as OHWM.





Photo 37. Irrigation canal (D14-2x, 21-2x) with break in slope and change in vegetation cover indicating OHWM.



Photo 38. Intermittent stream (D102-2, 110-2) with break in slope and change in vegetation cover indicating OHWM.



Photo 39. Intermittent stream (D15-2x, 22-2x) with TOB the same as OHWM.



Photo 40. Intermittent stream (D16-2x, 23-2x) with TOB the same as OHWM.





Photo 41. Ephemeral stream (D100-2, 108-2) with TOB the same as OHWM.



Photo 42. Intermittent stream (D16-2bx, 23-2x) with TOB the same as OHWM.



Photo 43. Ephemeral stream (D103-2, 111-2) with TOB the same as OHWM.



Photo 44. Intermittent stream (D116-2cx, 23-2x) where change and slope and vegetation cover indicate OHWM.





Photo 45. Fresh emergent wetland (W103-2, 106-2) dominated by *Carex* sp.



Photo 46. Upland (U102-2, 105-2) adjacent to fresh emergent wetland and dominated by perennial grasses.



Photo 47. Fresh emergent wetland (W101-2, 102-2) dominated by *Carex* sp.



Photo 48. Upland (U101-2, 103-2) adjacent to fresh emergent wetland on road slope.





Photo 49. Fresh emergent wetland (W5-2x, 24-2x) dominated by *Carex* sp.



Photo 50. Upland (U5-2x, 25-2x) adjacent to fresh emergent wetland and dominated by perennial grasses.



Photo 51. Fresh emergent wetland (W100-2, 100-2) dominated by *Carex* sp.



Photo 52. Upland (U100-2, 101-2) adjacent to fresh emergent wetland on road slope.





Photo 53. Seasonal wetland (W6-2x, 26-2x) dominated by *Carex* sp.



Photo 54. Upland (U6-2x, 27-2x) adjacent to seasonal wetland and dominated by perennial grasses.



Photo 55. Ephemeral stream (D18-2x, 28-2x) with TOB the same as OHWM.



Photo 56. Fresh emergent wetland (W55-2, 57-2) dominated by *Carex* sp.





Photo 57. Upland (U55-2, 58-2) adjacent to fresh emergent wetland and dominated by perennial grasses.



Photo 58. Seasonal wetland (W7-2x, 29-2x) dominated by *Carex* sp.



Photo 59. Upland (U7-2x, 30-2x) adjacent to seasonal wetland and dominated by perennial grasses.



Photo 60. Seasonal wetland (W8-2x, 31-2x) dominated by *Carex* sp.





Photo 61. Upland (U8-2x, 32-2x) adjacent to seasonal wetland and dominated by perennial grasses.



Photo 62. Perennial stream (D19-2x, 33-2x) with break in slope and change in vegetation cover indicating OHWM.



Photo 63. Perennial stream (D53-2, 56-2) with break in slope and change in vegetation cover indicating OHWM.



Photo 64. Intermittent stream (D20-2x, 43-2x) with break in slope and change in vegetation cover indicating OHWM.



	
<p>Photo 65. Ephemeral stream (D52-2bx, 55-2) with break in slope and change in vegetation cover indicating OHWM.</p>	<p>Photo 66. Irrigation canal (D51-2bx, 54-2) with break in slope and change in vegetation cover indicating OHWM.</p>
	
<p>Photo 67. Riparian wetland (W9-2x, 37-2x) dominated by <i>Carex</i> sp.</p>	<p>Photo 68. Upland (U9-2x, 38-2x) adjacent to riparian wetland and dominated by perennial grasses.</p>



	
<p>Photo 69. Ephemeral stream (D24-2x, 40-2x) with break in slope and change in vegetation cover indicating OHWM.</p>	<p>Photo 70. Non-wetland (NW50-2) in suspect depressional feature.</p>
	
<p>Photo 71. Irrigation canal (D50-2bx, 52-2) with break in slope and change in vegetation cover indicating OHWM.</p>	<p>Photo 72. Irrigation canal (D25-2x, 41-2x) with break in slope and change in vegetation cover indicating OHWM.</p>





Photo 73. Fresh emergent wetland (W50-2, 50-2) dominated by *Carex* sp. and perennial grass sp.



Photo 74. Upland (U50-2, 51-2) adjacent to fresh emergent wetland and dominated by perennial grasses.



Photo 75. Irrigation canal (D26-2x, 42-2x) with break in slope and change in vegetation cover indicating OHWM.



Photo 76. Fresh emergent wetland (W59-2, 59-2) dominated by *Carex* sp.





Photo 77. Upland (U59-2, 60-2) adjacent to riparian wetland and dominated by perennial grasses.



Photo 78. Fresh emergent wetland (W60-2, 61-2) dominated by *Carex* sp.



Photo 79. Upland (U60-2, 62-2) adjacent to fresh emergent wetland and dominated by perennial grasses.

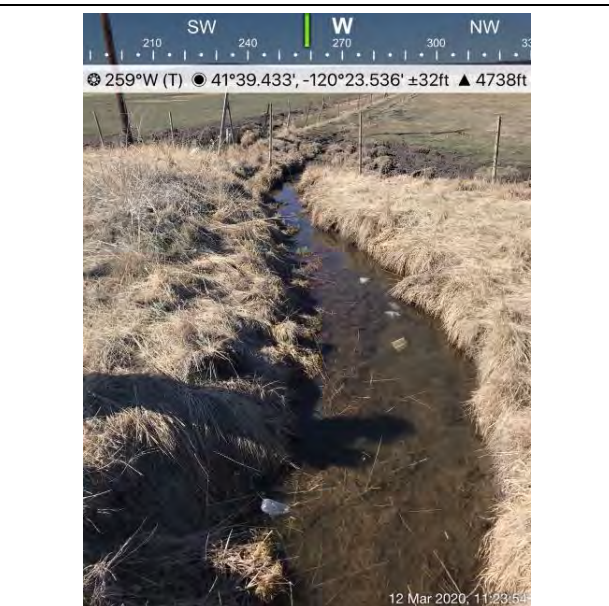


Photo 80. Irrigation canal (D27-2x, 43-2x) with break in slope and change in vegetation cover indicating OHWM.





Photo 81. Non-wetland (NW002-2) with suspect wetland features.



Photo 82. Non-vegetated ditch (D005-2, 019-2) with break in slope and change in vegetation cover indicating OHWM.



Photo 83. Wetland swale (W012-2, 016-2) dominated by *Carex* sp. and perennial grass sp.



Photo 84. Upland (U012-2, 017-2) adjacent to wetland swale and dominated by perennial grasses.



Photo 85. Fresh emergent wetland (W007-2, 014-2) dominated by *Carex* sp.



Photo 86. Upland (U007-2, 015-2) adjacent to fresh emergent wetland and dominated by perennial grasses.





Photo 87. Ephemeral stream (D004-2, 013-2) with break in slope and change in vegetation cover indicating OHWM.



Photo 88. Perennial stream (D003-2, 012-2) where break in bank slope and vegetation cover indicate OHWM.



Photo 89. Non-wetland (NW001-2, 011-2) with suspicious wetland features, confirmed upland.



Photo 90. Perennial stream (D002-2, 010-2) with break in slope and change in vegetation cover indicating OHWM.



Photo 91. Riparian/ fresh emergent wetland complex (W005-2, 008-2) dominated by *Salix* sp.



Photo 92. Upland (U005-2, 009-2) adjacent to riparian/ fresh emergent wetland complex and dominated by perennial grasses.





Photo 93. Perennial stream (D28-2x, 49-2x) with break in slope and change in vegetation cover indicating OHWM.



Photo 94. Riparian wetland (W12-2x, 50-2x) dominated by *Salix* sp. and *Carex* sp.



Photo 95. Upland (U12-2x, 51-2x) adjacent to riparian wetland and dominated by perennial grasses.



Photo 96. Non-wetland (NW2-2x, 48-2x) with suspicious features but lacking in wetland soil indicators.





Photo 97. Fresh emergent wetland (W003-2, 006-2) dominated by *Carex* sp.



Photo 98. Upland (U003-2, 007-2) adjacent to fresh emergent wetland and dominated by perennial grasses.

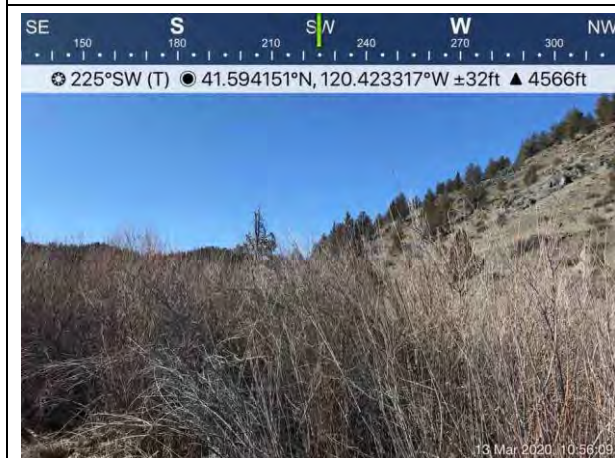


Photo 99. Riparian wetland (W13-2x, 52-2x) dominated by *Salix* sp.



Photo 100. Upland (U13-2x, 53-2x) adjacent to riparian wetland and dominated by perennial grasses.





Photo 101. Perennial stream (D29-2x, 54-2x) with break in slope and change in vegetation cover indicating OHWM.



Photo 102. Perennial stream (D001-2, 003-2) with break in slope and change in vegetation cover indicating OHWM.

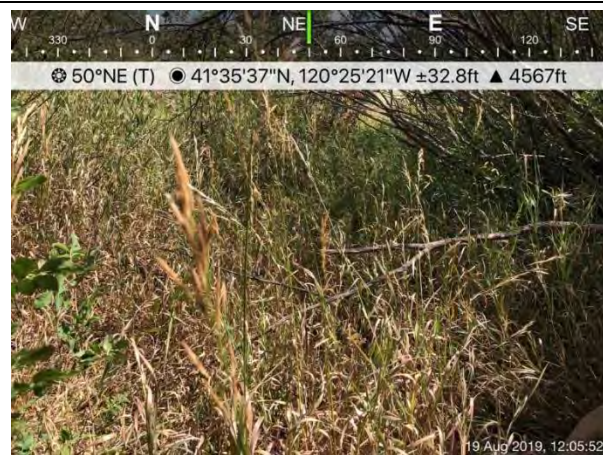


Photo 103. Riparian/ fresh emergent wetland complex (W002-2, 004-2) dominated by emergent grasses and *Salix* sp.

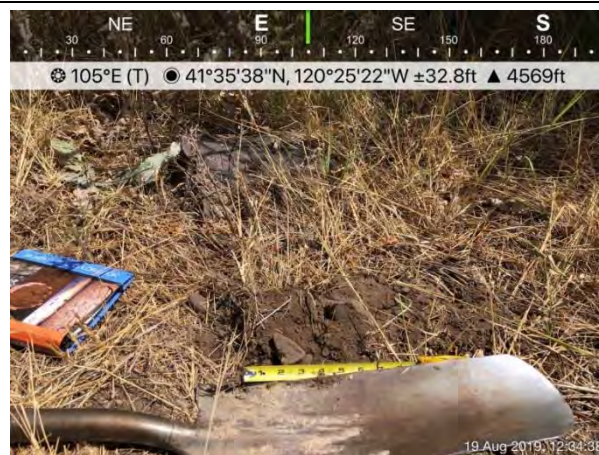


Photo 104. Upland (U002-2, 005-2) adjacent to riparian/ fresh emergent wetland complex and dominated by perennial grasses.





Photo 105. Seasonal wetland (W001-2, 001-2) dominated by *Salix* sp.



Photo 106. Upland (U001-2, 001-2) adjacent to seasonal wetland and dominated by perennial grasses.



Photo 107. Intermittent stream (D17-2x, 24-2x) with break in slope and change in vegetation cover indicating OHWM.



Photo 108. Ephemeral stream (D117-2, 137-2) with break in slope and change in vegetation cover indicating OHWM.





Photo 109. Ephemeral stream (D116-2, 136-2) with break in slope and change in vegetation cover indicating OHWM.



Photo 110. Fresh emergent wetland (W118-2, 133-2) dominated by *Carex* sp.

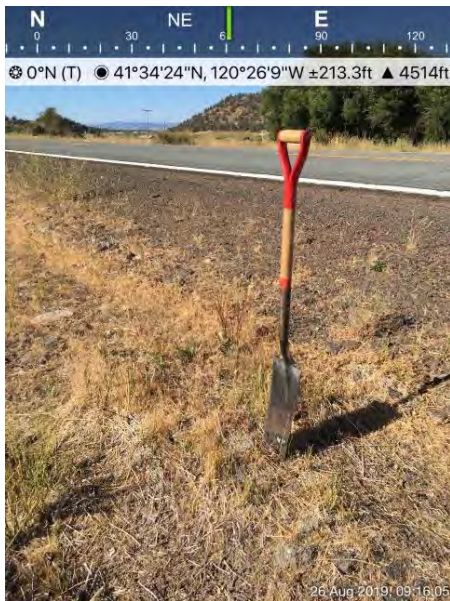





Photo 111. Upland (U118-2, 134-2) adjacent to fresh emergent wetland dominated by perennial grasses.



Photo 112. Ephemeral stream (D115-2, 135-2) with break in slope and change in vegetation cover indicating OHWM.



	
<p>Photo 113. Ephemeral stream (D114-2, 132-2) with TOB the same as OHWM.</p>	<p>Photo 114. Ephemeral stream (D113-2, 131-2) with break in slope and change in vegetation cover indicating OHWM.</p>
	<p>No Photograph</p>
<p>Photo 115. Ephemeral stream (D112-2, 131-2) with break in slope and change in vegetation cover indicating OHWM.</p>	



### Segment 3

The following photos are documentation of conditions within the study area during the field delineation conducted from August 2019 to May 2020.

Photo 1. Ephemeral stream (D202-3, 202-3) adjacent to Hwy 395 in perennial grassland.	Photo 2. Ephemeral stream (D203-3, 203-3) with TOB the same as OHWM.
Photo 3. Ephemeral stream (D200-3, 200-3) with TOB the same as OHWM.	Photo 4. Ephemeral stream (D201-3, 201-3) with TOB the same as OHWM.





Photo 5. Riparian wetland (W06-3x) dominated by *Salix* sp. and *Carex* sp.



Photo 6. Seasonal wetland (U06-3x) adjacent to riparian wetland.



Photo 7. Riparian/fresh emergent wetland complex (W07-3x, 32-3x) dominated by *Salix* sp.



Photo 8. Upland (U7-3x, 33-3x) adjacent to riparian/fresh emergent wetland.



Photo 9. Riparian wetland (W09-3x, 36-3x) dominated by *Salix* sp.



Photo 10. Upland (U9-3x, 37-3x) adjacent to riparian wetland.





Photo 11. Riparian/fresh emergent wetland complex (W08-3x, 34-3x) dominated by *Salix* sp.



Photo 12. Upland (U08-3x, 35-3x) adjacent to riparian/fresh emergent wetland.



Photo 13. Riparian wetland (W205-3, 206-3) dominated by *Typha* sp.



Photo 14. Upland (U205-3, 207-3) adjacent to riparian wetland.



Photo 15. Perennial stream (D205-3, 205-3) with OHWM the same as TOB.



Photo 16. Riparian/fresh emergent wetland complex (W206-3, 208-3) dominated by *Salix* sp.



Photo 17. Upland (U206-3, 209-3) adjacent to riparian/fresh emergent wetland complex.



Photo 18. Perennial stream (D01-3, 01-3) in riparian/fresh emergent wetland complex.





Photo 19. Riparian/fresh emergent wetland complex (W01-3, 02-3) dominated by *Carex* sp.



Photo 20. Upland (U01-3, 03-3) adjacent to riparian/fresh emergent wetland complex.



Photo 21. Fresh emergent wetland (W02-3, 04-3) dominated by *Carex* sp.



Photo 22. Upland (U02-3, 05-3) adjacent to fresh emergent wetland.





Photo 23. Riparian/fresh emergent wetland complex (W11-3x, 38-3x) dominated by *Salix* sp.



Photo 24. Upland (U11-3x, 39-3x) adjacent to riparian/fresh emergent wetland complex.



Photo 25. Riparian wetland (W12-3x, 41-3x) dominated by *Salix* sp.



Photo 26. Upland (U12-3x, 42-3x) adjacent to riparian wetland.



Photo 27. Pond (W110-2, 114-2) dominated by *Carex* sp.



Photo 28. Irrigation canal (D05-3, 13-3) with TOB the same as OHWM.





Photo 29. Perennial stream (D02-3, 01-3) adjacent to Hwy 395 in perennial grassland.



Photo 30. Pond (D24-3x, 51-3x) in seasonal wetland.



Photo 31. Seasonal wetland (W15-3x, 45-3x) dominated by *Carex* sp.



Photo 32. Upland (U15-3x, 46-3x) adjacent to seasonal wetland.

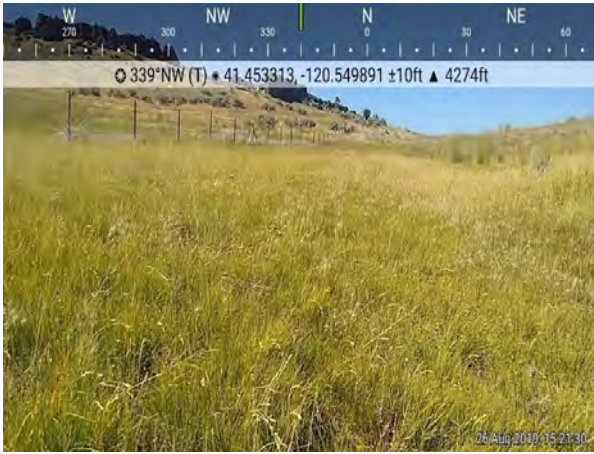


Photo 33. Fresh emergent wetland (W14-3, 07-3) dominated by *Carex* sp.



Photo 34. Upland (U14-3, 08-3) adjacent to fresh emergent wetland.



Photo 35. Pond (D22-3x) in seasonal wetland.



Photo 36. Seasonal wetland (W14-3x, 43-3x) dominated by *Carex* sp.



<p>Photo 37. Upland (U14-3x,44-3x) adjacent to seasonal wetland.</p>	<p>Photo 38. Pond (D23-3x, 47-3x) adjacent to riparian wetland.</p>
<p>Photo 39. Riparian wetland (W16-3x, 48-3x) generally follows bottom of berm and pond water's edge.</p>	<p>Photo 40. Upland (U16-3x, 49-3x) adjacent to riparian wetland.</p>
<p>Photo 41. Irrigation canal (D03-3, 09-3) adjacent to Hwy 395 in perennial grassland.</p>	<p>Photo 42. Fresh emergent wetland (W19-3, 11-3) dominated by grasses.</p>





Photo 43. Upland (U19-3, 12-3) adjacent to fresh emergent wetland.



Photo 44. Perennial stream (D004a-3, 10-3) with TOB the same as OHWM.



Photo 45. Irrigation canal (D105-3, 107-3) adjacent to Hwy 395 in perennial grassland.



Photo 46. Fresh emergent wetland (W100-3, 104-3) dominated by *Carex* sp.



Photo 47. Upland (U100-3, 105-3) adjacent to fresh emergent wetland.



Photo 48. Perennial stream (D104-3, 106-3) adjacent to Hwy 395 in perennial grassland.



Photo 49. Intermittent stream (D103-3, 103-3) with TOB the same as OHWM.



Photo 50. Ephemeral stream (D102-3, 102-3) adjacent to Hwy 395 in perennial grassland.



<p>Photo 51. Perennial stream (D100-3, 100-3) adjacent to Hwy 395 in perennial grassland.</p>	<p>Photo 52. Ephemeral stream (D101-3, 101-3) adjacent to Hwy 395 in perennial grassland.</p>
<p>Photo 53. Upland adjacent to (U5-3x, 27-3x) adjacent to fresh emergent wetland.</p>	<p>Photo 54. Fresh emergent wetland (W05-3x, 26-3x) dominated <i>Typha</i> sp.</p>
	<p>No Photograph</p>
<p>Photo 55. Perennial stream (D204-3, 204-3) adjacent to Hwy 395 in perennial grassland and woodland.</p>	



## Segment 4

The following photos are documentation of conditions within the study area during the field delineation conducted from August 2019 to May 2020.

	
<p>Photo 1. Ephemeral stream (D01-4, 02-4) with TOB the same as OHWM.</p>	<p>Photo 2. NW1-4, 01-4 (NW1-4, 01-4) suspect area, confirmed upland.</p>
	
<p>Photo. 3. Intermittent stream (D09-4, 13-4) adjacent to Hwy 396 in sagebrush.</p>	<p>Photo. 4. Vegetated ditch (D302-4, 302-4) adjacent to Hwy 396 in perennial grassland.</p>



Photo 5. Riparian wetland (W17-4x, 52-4x) dominated by *Salix* sp.



Photo 6. Upland (U17-4x, 53-4x) adjacent to riparian wetland.



Photo 7. Intermittent stream (D08-4) adjacent to Hwy 395 in sagebrush.



Photo 8. Fresh emergent wetland (W19-4x, 54-4x) dominated by *Carex* sp.





Photo 9. Upland (U19-4x, 55-4x) adjacent to fresh emergent wetland.



Photo 10. Irrigation canal (D07-4, 11-4) adjacent to Hwy 395 in riparian/fresh emergent wetland complex.



Photo 11. Fresh emergent wetland (W20-4x, 56-4x) dominated by *Carex* sp.



Photo 12. Upland (U20-4x, 57-4x) adjacent to fresh emergent wetland.



Photo 13. Irrigation canal (D06-4, 11-4) adjacent to Hwy 395 in riparian/fresh emergent wetland complex.



Photo 14. Riparian/fresh emergent wetland complex (W03-4, 09-40 dominated by *Typha* sp.).



Photo 15. Upland (U03-4, 10-4) adjacent to riparian/fresh emergent wetland complex.



Photo 16. Perennial stream (D05-4, 08-4) adjacent to Hwy 395 in perennial grassland.





Photo 17. Riparian wetland (W23-4x, 58-4x) dominated by *Salix* sp.



Photo 18. Upland (U23-4x, 59-4x) adjacent to riparian wetland.



Photo 19. Intermittent stream (D04-4, 07-4) adjacent to Hwy 395 in riparian/fresh emergent wetland complex.



Photo 20. Perennial stream (D03-4, 06-4) adjacent to Hwy 395 in fresh emergent wetland.



Photo 21. Seasonal wetland (W027-4x, 60-4x) dominated by *Carex* sp.



Photo 22. Upland (U27-4x, 61-4x) adjacent to seasonal wetland.





Photo 23. Riparian wetland (W29-4x, 62-4x) dominated by *Alnus* sp.



Photo 24. Upland (U29-4x, 63-4x) adjacent to riparian wetland.



Photo 25. Fresh emergent wetland (W01-4, 04-4) dominated by *Carex* sp.



Photo 26. Upland (U01-4, 05-4) adjacent to fresh emergent wetland.



Photo 27. Seasonal wetland (W30-4x, 64-4x) dominated by *Carex* sp.



Photo 28. Upland (U30-4x, 65-4x) adjacent to seasonal wetland.



Photo 29. Irrigation canal (D02-4, 03-4) adjacent to Hwy 395 in agriculture land.



Photo 30. Non-vegetated ditch (D01-4x, 66-4x) adjacent to Hwy 395 in agriculture land.



	
<p>Photo 31. Seasonal wetland (W33-4x, 67-4x) dominated by <i>Carex</i> sp.</p>	<p>Photo 32. Upland (U33-4x, 68-4x) adjacent to seasonal wetland.</p>
	
<p>Photo 33. Perennial stream (D100-4, 100-4) adjacent to Hwy 395 in riparian habitat.</p>	<p>Photo 34. Ephemeral stream (D301-4, 301-4) adjacent to Hwy 395 in sagebrush.</p>

	
<p>Photo 35. Ephemeral stream (D300-4, 300-4) adjacent to Hwy 395 in sagebrush.</p>	<p>Photo 36. Wetland swale (W34-4x, 69-4x) dominated by <i>Carex</i> sp.</p>
	
<p>Photo 37. Upland (U34-4x, 70-4x) adjacent to wetland swale.</p>	<p>Photo 38. Perennial stream (D213-4, 219-4) in riparian wetland.</p>



	
<p>Photo 39. Riparian wetland (W35-4x, 71-4x) dominated by <i>Carex</i> sp.</p>	<p>Photo 40. Upland (U35-4x, 72-4x) adjacent to riparian wetland.</p>
	
<p>Photo 41. Intermittent stream (D212-4, 218-4) adjacent to Hwy 395 in woodland.</p>	<p>Photo 42. Seasonal wetland (W37-4x, 73-4x) dominated by <i>Carex</i> sp.</p>



Photo 43. Upland (U37-4x, 74-4x) adjacent to seasonal wetland.



Photo 44. Fresh emergent wetland (W38-4x, 75-4x) dominated by *Carex* sp.



Photo 45. Upland (U38-4x, 76-4x) adjacent to fresh emergent wetland.



Photo 46. Ephemeral stream (D211-4, 217-4) adjacent to Hwy 395 in perennial grassland.





Photo 47. Riparian wetland (W203-4, 215-4) dominated by *Carex* sp.



Photo 48. Upland (U203-4, 216-4) adjacent to riparian wetland.



Photo 49. Seasonal wetland (W41-4x, 77-4x) dominated by *Carex* sp.



Photo 50. Upland (U41-4x, 78-4x) adjacent to seasonal wetland.





Photo 51. Ephemeral stream (D209-4, 213-4) adjacent to Hwy 395 in perennial grassland.



Photo 52. Ephemeral stream (D209-4, 214-4) with TOB the same as OHWM.



Photo 53. Seasonal wetland (W42-4x, 79-4x) dominated by *Carex* sp.



Photo 54. Upland (U42-4x, 80-4x) adjacent to seasonal wetland.



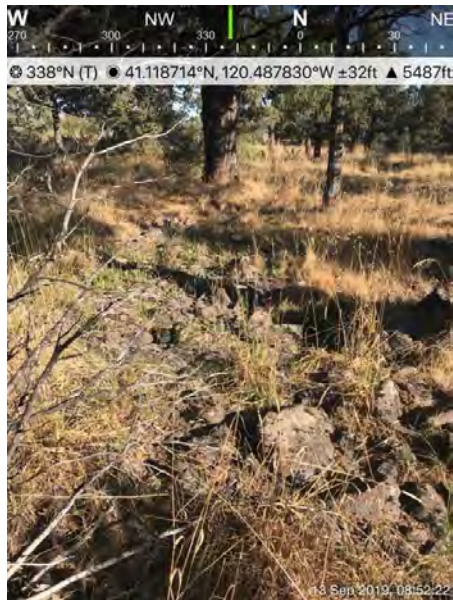


Photo 55. Intermittent stream (D206-4, 210-4) adjacent to Hwy 395 in woodland.



Photo 56. Ephemeral stream (D208-4, 212-4) with TOB the same as OHWM.



Photo 57. Ephemeral stream (D207-4, 211-4) with TOB the same as OHWM.



Photo 58. Intermittent stream (D206-4, 210-4) adjacent to Hwy 395 in woodland.



Photo 59. Ephemeral stream (D205, 209-4) with TOB the same as OHWM.



Photo 60. Fresh emergent wetland (W201-4, 207-4) dominated by *Carex* sp.



Photo 61. Upland (U201-4, 208-4) adjacent to fresh emergent wetland.



Photo 62. Seasonal wetland (W44-4x, 81-4x) dominated by *Carex* sp.





Photo 63. Upland (U44-4x, 82-4x) adjacent to seasonal wetland.



Photo 64. Ephemeral stream (D204-4, 206-4) adjacent to Hwy 395 in perennial grassland.



Photo 65. Ephemeral stream (D203-4, 205-4) adjacent to Hwy 395 in perennial grassland.



Photo 66. Ephemeral stream (D202-4, 204-4) with TOB the same as OHWM.



Photo 67. Ephemeral stream (D100-4x, 83-4x) adjacent to Hwy 395 in sagebrush.



Photo 68. Fresh emergent wetland (W200-4, 202-4) dominated by *Carex* sp.

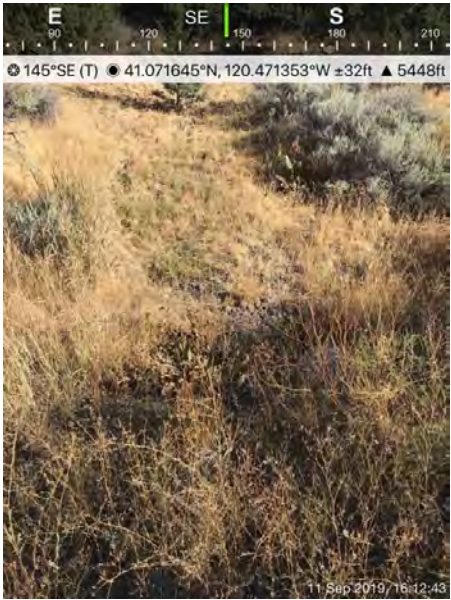


Photo 69. Upland (U200-4, 203-4) adjacent to fresh emergent wetland.







Photo 70. Ephemeral stream (D201-4, 201-4) adjacent to Hwy 395 in sagebrush.



	<p>No Photograph</p>
<p>Photo 71. Ephemeral stream (D200-4, 200-4) with TOB the same as OHWM.</p>	

## Segment 5

The following photos are documentation of conditions within the study area during the field delineation conducted from August 2019 to May 2020.

	
<p>Photo 1. Riparian wetland (W500-5, 550-5) dominated by <i>Carex</i> sp.</p>	<p>Photo 2. Upland (U500-5, 501-5) adjacent to riparian wetland.</p>
	
<p>Photo 3. Perennial stream (D500-5, 502-5) adjacent to Hwy 396 in riparian wetland.</p>	<p>Photo 4. Fresh emergent wetland (W202-5, 204-5) dominated by <i>Carex</i> sp.</p>



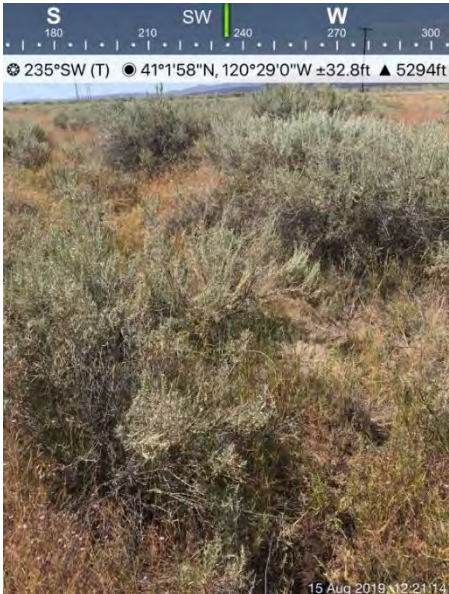
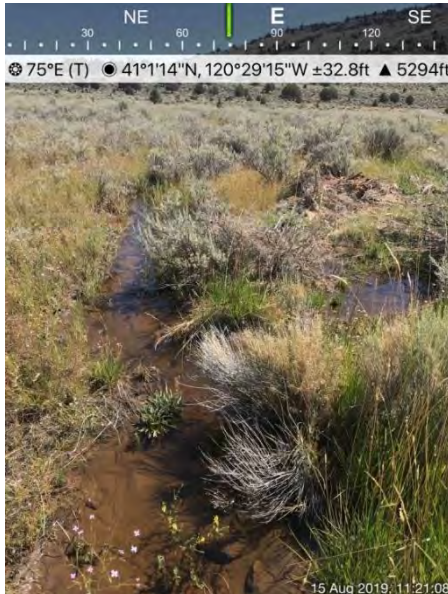


	
<p>Photo 5. Upland (U202-5, 205-5) adjacent to fresh emergent wetland.</p>	<p>Photo 6. Non-vegetated ditch (D200-5, 203-5) adjacent to Hwy 395 in sagebrush.</p>
	
<p>Photo 7. Fresh emergent wetland (W50-5, 50-5) dominated by <i>Carex</i> sp.</p>	<p>Photo 8. Upland (U50-5, 51-5) adjacent to fresh emergent wetland.</p>





Photo 9. Seasonal wetland (W200-5, 201-5) dominated by *Carex* sp.



Photo 10. Upland (U200-5, 202-5) adjacent to seasonal wetland.



Photo 11. Seasonal wetland (W4-5x, 1-5x) dominated by *Carex* sp.



Photo 12. Upland (U4-5x, 2-5x) adjacent to seasonal wetland.





Photo 13. Irrigation canal (D51-5x, 3-5x) adjacent to Hwy 395 in perennial grassland.

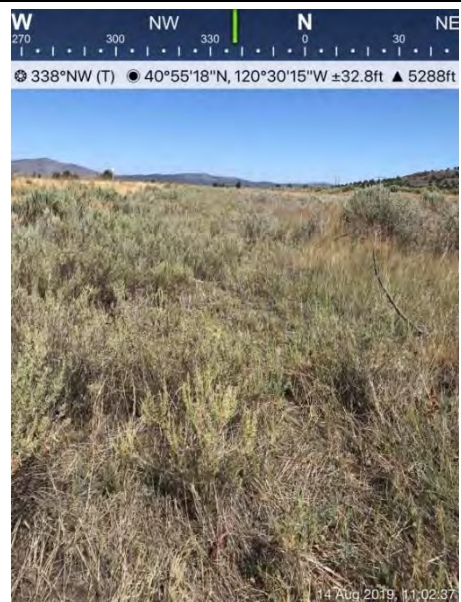


Photo 14. Non-wetland (NW200-5, 200-5) suspect area, confirmed upland.



Photo 15. Seasonal wetland (W5-5x, 4-5x) dominated by *Carex* sp.



Photo 16. Upland (U5-5x, 5-5x) adjacent to seasonal wetland.



Photo 17. Non-wetland (NW01-5x, 06-5x) suspect area, confirmed upland.



Photo 18. Ephemeral stream (D100-5, 100-5) adjacent to Hwy 395 in perennial grassland.



## Segment 6

The following photos are documentation of conditions within the study area during the field delineation conducted from August 2019 to May 2020.




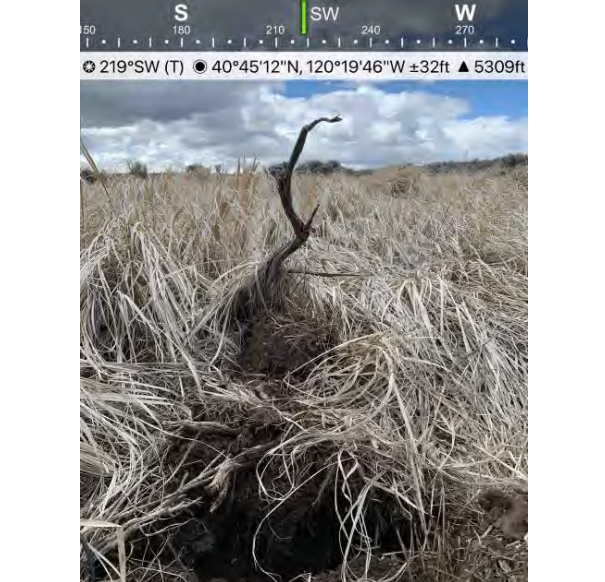
	
<p>Photo 1. Non-vegetated ditch (D101-6, 101-6) showing break in bank slope and change in vegetation cover with some upland vegetation occurring below the OHWM.</p>	<p>Photo 2. Ephemeral stream (D100-6, 100-6) showing break in bank slope and change in sediment indicating the OHWM.</p>
	
<p>Photo 3. Intermittent stream (D01-6x, 03-6x) with standing water and break in slope and change in vegetation cover indicating the OHWM.</p>	<p>Photo 4. Fresh emergent wetland (W01-6x, 01-6x) dominated by <i>Phalaris</i> sp.</p>





Photo 5. Upland (U01-6x, 02-6x) near *phalaris* sp. wetland, close to the Hwy 395 road slope.



Photo 6. Ephemeral stream (D02-6x, 04-6x) with standing water and break in slope and change in vegetation cover indicating the OHWM.



Photo 7. Seasonal wetland (W200-6, 201-6) in perennial grassland.



Photo 8. Upland (U200-6, 2020-6) with minimal vegetation in rocky area.





Photo 9. Seasonal wetland (W02-6x, 05-6x) dominated by *juncus* sp. with areas of open ground.



Photo 10. Upland (U02-6x, 06-6x) dominated by annual grasses.



Photo 11. Non-wetland (NW01-6x, 07-6x) suspicious area with standing water confirmed as upland.



Photo 12. Ephemeral stream (D03-6x, 08-6x) with standing water and break in slope, change in sediment, and change in vegetation cover as OHWM indicators.

<p>Photo 13. Seasonal wetland (W03-6x, 09-6x) dominated by <i>Phalaris</i> sp.</p>	<p>Photo 14. Upland (U03-6x, 10-6x) dominated by annual grasses.</p>
<p>Photo 15. Seasonal wetland (W05-6x, 11-6x) with standing water and sufficient patches of hydrophytic vegetation.</p>	<p>Photo 16. Upland (U05-6x, 12-6x) with rocky outcrops and patches of annual grasses.</p>





Photo 17. Ephemeral stream (D50-6xb, 12-6x) with standing water.



Photo 18. Ephemeral stream (50-6, 50) with break in bank slope indicating the OHWM.



Photo 19. Wetland swale (W6-6, 15-6) dominated by hydrophytic grass species.



Photo 20. Upland (U6-6, 16-6) dominated by annual grasses and *artemisia* sp.





Photo 21. Wetland seep/spring (W06-6x, 13-6x) with *Typha* sp. and standing water.

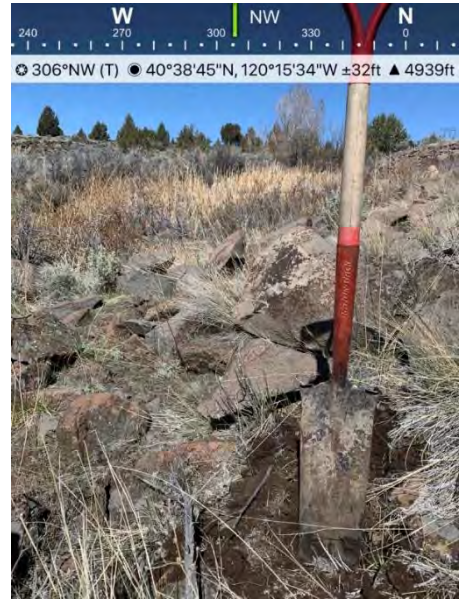


Photo 22. Upland (U06-6x, 14-6x) in rocky slope with some upland vegetation.



Photo 23. Intermittent stream (D200-6, 200-6) with break in bank slope and TOB the same as OHWM.

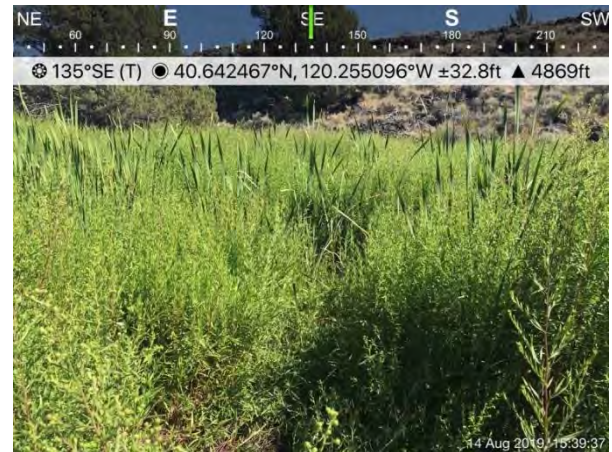


Photo 24. Fresh emergent wetland (W5-6, 13-6) with some *Typha* sp. becoming established.





Photo 25. Upland (U5-6, 14-6) dominated by annual grasses.

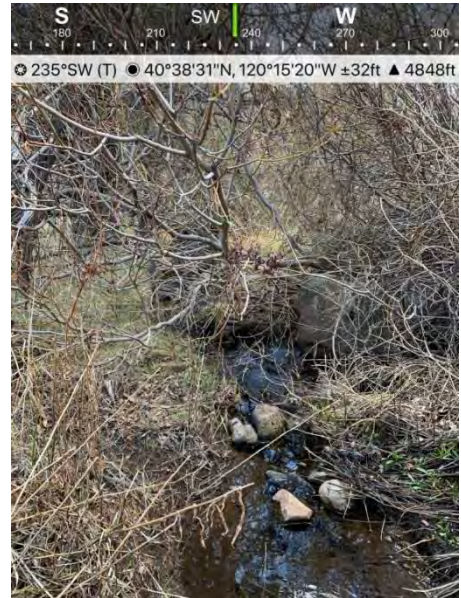


Photo 26. Perennial stream (D05-6x, 15-6x) showing break in slope indicating the OHWM and with surface water present.

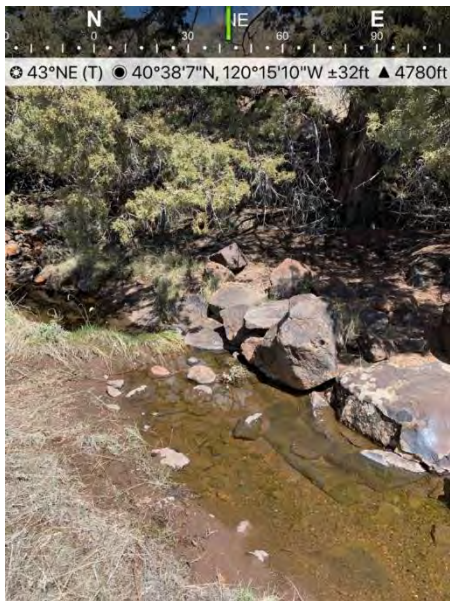



Photo 27. Ephemeral stream (D06-6x, 16-6x) with break in bank slope indicating the OHWM, water present, and TOB the same as OHWM.



Photo 28. Wetland swale (W50-6x, 50-6x) with *juncus* sp. and ponded surface water.

	<p>No Photograph</p>
<p>Photo 29. Upland (U50-6x, 51-6x) dominated by annual grasses.</p>	



## Segment 7

The following photos are documentation of conditions within the study area during the field delineation conducted from August 2019 to May 2020.



Photo 1. Non-vegetated ditch (D11-7, 21-7) adjacent to Hwy 395 in perennial grassland.



Photo 2. Perennial stream (D4-7, 10) adjacent to Hwy 395 in sagebrush.



Photo 3. Riparian wetland (W4-7, 11-7) dominated by *Salix* sp.



Photo 4. Upland (U4-7, 12-7) adjacent to riparian wetland.





Photo 5. Seasonal wetland (W8-7, 17-7) dominated by *Carex* sp.



Photo 6. Upland (U8-7, 18-7) adjacent to seasonal wetland.



Photo 7. Perennial stream (D3-7, 9-7) adjacent to Hwy 395 in perennial grassland.



Photo 8. Intermittent stream (D2-7, 8-7) in seasonal wetland.





Photo 9. Intermittent stream (D50-7x, 50-7x) adjacent to Hwy 395 in perennial grassland.

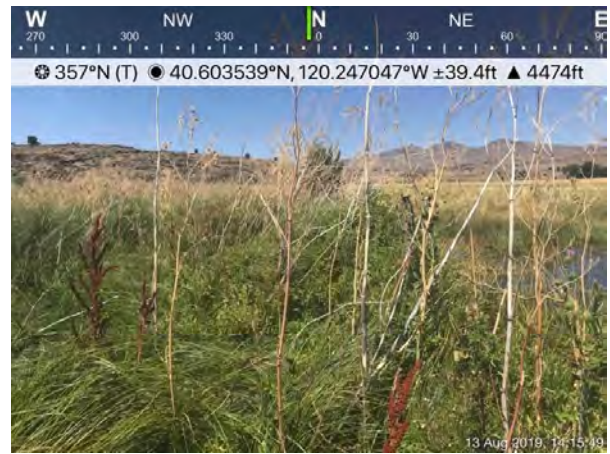


Photo 10. Seasonal wetland (W3-7, 6-7) dominated by *Carex* sp.



Photo 11. Upland (U3-7, 7-7) adjacent to seasonal wetland.



Photo 12. Non-vegetated ditch (D10-7) adjacent to Hwy 395 in sagebrush.



Photo 13. Ephemeral stream (D51-7x, 51-7x) adjacent to Hwy 395 in perennial grassland.



Photo 14. Riparian wetland (W2-7, 4-7) dominated by *Salix* sp.



Photo 15. Upland (U2-7, 5-7) adjacent to riparian wetland.



Photo 16. Fresh emergent wetland (W1-7, 2-7) dominated by *Schoenoplectus acutus*.





Photo 17. Upland (U1-7, 3-7) adjacent to fresh emergent wetland.



Photo 18. Perennial stream (D1, 1) adjacent to fresh emergent wetland.



Photo 19. Perennial stream (D1-7Bx, 1-7) adjacent to riparian wetland.



Photo 20. Ephemeral stream (D01-7, 01-7) with TOB the same as OHWM.



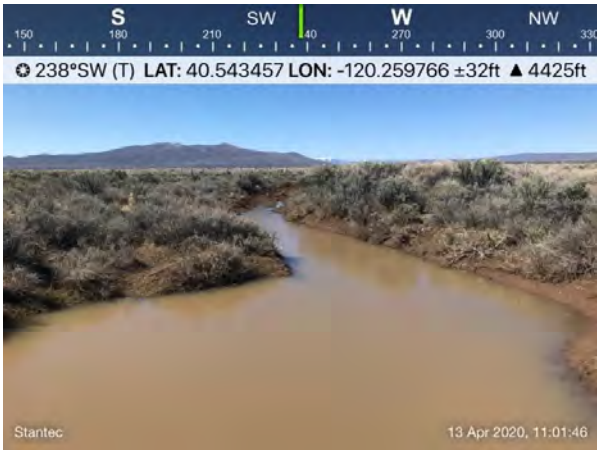


Photo 21. Intermittent stream (D100-7x, 100-7x) adjacent to Hwy 395 in sagebrush.



Photo 22. Intermittent stream (D03-07, 01-7) adjacent to Hwy 395 in sagebrush.



Photo 23. Ephemeral stream (D102-7x, 101-7x) adjacent to Hwy 395 in sagebrush.



Photo 24. Seasonal wetland (W01-7, 02-7) dominated by *Carex* sp.



Photo 25. Upland (U01-7, 03-7) adjacent to seasonal wetland.



Photo 26. Ephemeral stream (D104-7x, 103-7x) adjacent to Hwy 395 in sagebrush.



Photo 27. Ephemeral stream (D205-7, 205-7) adjacent to Hwy 395 in perennial grassland.



Photo 28. Ephemeral stream (D204-7, 204-7) with TOB the same as OHWM.





Photo 29. Ephemeral stream (D203-7, 203-7) with TOB the same as OHWM.






Photo 30. Ephemeral stream (D201-7, 201-7) adjacent to Hwy 395 in perennial grassland.



Photo 31. Ephemeral stream (D202-7, 202-7) adjacent to Hwy 395 in perennial grassland.



Photo 32. Ephemeral stream (D103-7x, 102-7x) with TOB the same as OHWM.

<p><b>North Elevation</b></p> <p>☼ 194°S (T) ● 40°24'16"N, 120°17'16"W ±32.8ft ▲ 4367ft</p>  <p>29 Aug 2019, 11:25:12</p>	<p>N NE E SE</p> <p>0 30 60 90 120 150</p> <p>☼ 65°NE (T) ● 40.394504°N, 120.299296°W ±32ft ▲ 4144ft</p>  <p>0 Sep 2019, 15:45:46</p>
<p>Photo 33. Ephemeral stream (D05-7, 05-7) adjacent to Hwy 395 in sagebrush.</p>	<p>Photo 34. Intermittent stream (D200-7, 200-7) adjacent to Hwy 395 in sagebrush.</p>
<p><b>North West Elevation</b></p> <p>☼ 151°SE (T) ● 40°23'28"N, 120°18'25"W ±32.8ft ▲ 4096ft</p>  <p>29 Aug 2019, 10:21:01</p>	<p>No Photograph</p>
<p>Photo 35. Intermittent stream (D04-7, 04-7) adjacent to Hwy 395 in sagebrush.</p>	



## Segment 8

The following photos are documentation of conditions within the study area during the field delineation conducted from August 2019 to May 2020.

	
<p>Photo 1. Intermittent stream (D102-8, 105-8) with TOB the same as OHWM.</p>	<p>Photo 2. Intermittent stream (D201-8, 201-8) adjacent to Hwy 395 in sagebrush.</p>
	
<p>Photo 3. Riparian wetland (W102-8, 103-8) dominated by <i>Salix</i> sp.</p>	<p>Photo 4. Upland (U101-8, 104-8) adjacent to riparian wetland.</p>



Photo 5. Perennial stream (D101-8, 105-8) adjacent to Hwy 395 in riparian wetland.



Photo 6. Non-wetland (NW50-8x, 50-8x) suspect area, confirmed upland.



Photo 7. Riparian wetland (W100-8, 100-8) dominated by *Typha* sp.



Photo 8. Upland (U100-8, 101-8) adjacent to riparian wetland.





Photo 9. Perennial stream (D100-8, 102-8) adjacent to Hwy 395 in riparian wetland.



Photo 10. Non-wetland (NW1-8x, 1-8x) suspect area, confirmed upland.



Photo 11. Irrigation canal (D103-8, 107-8) adjacent to Standish Buntingville Rd in perennial grassland.



Photo 12. Intermittent stream (D104-8, 108-8) adjacent to Standish Buntingville Rd in riparian habitat.



Photo 13. Irrigation canal (D105-8, 109-8) adjacent to Standish Buntingville Rd in perennial grassland.



Photo 14. Non-vegetated ditch (D1-8x, 2-8x) adjacent to Standish Buntingville Rd in agriculture land.



Photo 15. Seasonal wetland (W103-8, 110-8) dominated by *Lepidium latifolium*.



Photo 16. Upland (U103-8, 111-8) adjacent to seasonal wetland.





Photo 17. Intermittent stream (D108-8, 116-8) adjacent to Standish Buntingville Rd in perennial grassland.



Photo 18. Perennial stream (D107-8, 115-8) adjacent to Standish Buntingville Rd in perennial grassland.



Photo 19. Seasonal wetland (W5-8x, 3-8x) dominated by *Carex* sp.



Photo 20. Upland (U5-8x, 4-8x) adjacent to seasonal wetland.

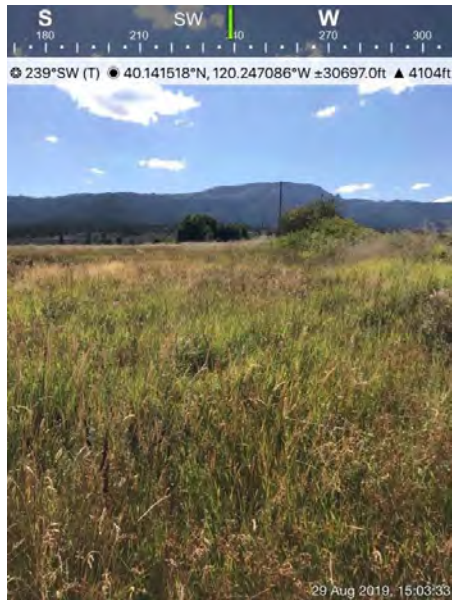


Photo 21. Fresh emergent wetland (W105-8, 113-8) dominated by *Carex* sp. and hydrophytic grasses.



Photo 22. Upland (U105-8, 114-8) adjacent to fresh emergent wetland.



Photo 23. Intermittent stream (D106-8, 112-8) adjacent to Standish Buntingville Rd in woodland.



Photo 24. Non-wetland (NW200-8, 202-8) suspect area, confirmed upland.





Photo 25. Ephemeral stream (D202-8, 203-8) adjacent to Hwy 395 in perennial grassland.



Photo 26. Intermittent stream (D200-8, 200-8) adjacent to Hwy 395 in riparian wetland.



Photo 27. Riparian wetland (W01-1, 01-1) dominated by *Salix* sp.



Photo 28. Upland (U01-8, 02-8) adjacent to riparian wetland.



	
<p>Photo 29. Riparian wetland (W6-8x, 5-8x) dominated by <i>Salix</i> sp.</p>	<p>Photo 30. Upland (U6-8x, 6-8x) adjacent to riparian wetland.</p>
	
<p>Photo 31. Intermittent stream (D2-8x, 7-8x) adjacent to Hwy 395 in woodland and perennial grassland.</p>	<p>Photo 32. Riparian wetland (W8-8x, 8-8x) dominated by <i>Salix</i> sp.</p>
	<p>No Photograph</p>
<p>Photo. 33. Upland (U8-8x, 9-8x) adjacent to riparian wetland.</p>	



## Segment 9

The following photos are documentation of conditions within the study area during the field delineation conducted from August 2019 to May 2020.


	
<p>Photo 1. Intermittent stream (D007-9, 007-9) adjacent to Hwy 395 in <i>Salix</i> sp. riparian habitat.</p>	<p>Photo 2. Non-wetland (NW1-9x, 1-9x) suspect area, confirmed upland.</p>
	
<p>Photo 3. Non-wetland (NW2-9x, 2-9x) suspect area, confirmed upland.</p>	<p>Photo 4. Intermittent stream (D006-9, 006-9) adjacent to Hwy 395 in sagebrush.</p>





Photo 5. Ephemeral stream (D005-9, 005-9) adjacent to Hwy 395 in sagebrush.



Photo 6. Ephemeral stream (D01-9x, 03-9x) adjacent to Hwy 395 in sagebrush.



Photo 7. Ephemeral stream (D004-9, 004-9) adjacent to Hwy 395 in perennial grassland and conifer woodland.



Photo 8. Ephemeral stream (D003-9, 003-9) with TOB the same as OHWM.





Photo 9. Intermittent stream (D002-9, 002-9) adjacent to Hwy 395 in woodland.



Photo 10. Seasonal wetland (W100-9x, 100-9x) dominated by *Schoenoplectus acutus*.



Photo 11. Upland (U100-9x, 101-9x) adjacent to seasonal wetland.



Photo 12. Ephemeral stream (D001-9, 001-9) adjacent to Hwy 395 in woodland.





Photo 13. Ephemeral stream (D013-9, 15-9) adjacent to Hwy 395 in woodland.



Photo 14. Ephemeral stream (D012-9, 14-9) adjacent to Hwy 395 in perennial grassland.



Photo 15. Ephemeral stream (D011-9, 13-9) adjacent to Hwy 395 in woodland.



Photo 16. Ephemeral stream (D02-9x, 4-9x) adjacent to Hwy 395 in perennial grassland and sagebrush.





Photo 17. Fresh emergent wetland (W001-9, 011-9) dominated by *Carex* sp.



Photo 18. Upland (U001-9,012-9) adjacent to fresh emergent wetland.



Photo 19. Ephemeral stream (D010-9, 010-9) with TOB the same as OHWM.



Photo 20. Ephemeral stream (D009-9, 009-9) adjacent to Hwy 395 in woodland.



Photo 21. Irrigation canal (D008-9, 008-9) adjacent to Hwy 395 in woodland.



Photo 22. Intermittent stream (D03-9x, 5-9x) adjacent to Hwy 395 in *Salix* sp. riparian habitat.



## Segment 10

The following photos are documentation of conditions within the study area during the field delineation conducted from August 2019 to May 2020.





	
<p>Photo 1. Perennial stream (D08-10, 14-10) with TOB the same as OHWM.</p>	<p>Photo 2. Intermittent stream (D07-10, 13-10) with TOB the same as OHWM.</p>
	
<p>Photo 3. Riparian/fresh emergent wetland complex (W01-10x, 01-10x) dominated by <i>Salix</i> sp.</p>	<p>Photo 4. Upland (U01-10x, 02-10x) adjacent to riparian/fresh emergent wetland complex.</p>





Photo 5. Riparian/fresh emergent wetland complex (W02-10x, 03-10x) dominated by *Salix* sp.



Photo 6. Upland (U02-10x, 04-10x) adjacent to riparian/fresh emergent wetland complex.



Photo 7. Ephemeral stream (D01-10x, 05-10x) with TOB the same as OHWM.



Photo 8. Perennial stream (D06-10, 12-10) adjacent to highway 395 in *Salix* sp. riparian habitat.



Photo 9. Non-wetland (NW01-10x, 06-10x) suspect area, confirmed to be upland.



Photo 10. Fresh emergent wetland (W03-10x, 0710x) dominated by *Salix* sp.





Photo 11. Upland (U03-10x, 08-10x) adjacent to fresh emergent wetland.



Photo 12. Wetland swale (W05-10, 09-10) dominated by *Salix* sp.



Photo 13. Upland (U05-10, 10-10) adjacent to wetland swale.



Photo 14. Perennial stream (D05-10, 11-10) with TOB the same as OHWM.







	
<p>Photo 15. Ephemeral stream (D2-10x, 9-10x) adjacent to Hwy 395 in perennial grassland with rocky slopes.</p>	<p>Photo 16. Intermittent stream (D203-10, 205-10) adjacent to Hwy 395 in perennial grassland.</p>
	
<p>Photo 17. Ephemeral stream (D202-10, 204-10) adjacent to Hwy 395 in sagebrush.</p>	<p>Photo 18. Ephemeral stream (D04-10, 08-10) adjacent to Hwy 395 in perennial grassland.</p>





Photo 19. Fresh emergent wetland (W04-10, 06-10) with *Carex* sp. and *Rumex* sp.



Photo 20. Upland (U04-10, 07-10) adjacent to fresh emergent wetland.

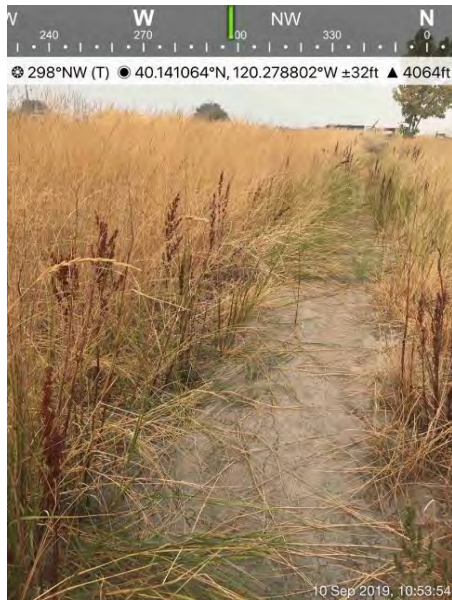


Photo 21. Ephemeral stream (D03-10, 05-10) in fresh emergent wetland.



Photo 22. Ephemeral stream (D03-10, 05-10) adjacent to HWY 395 in sagebrush and perennial grassland.





Photo 23. Ephemeral stream (D02-10, 04-10) adjacent to HWY 395 in perennial grassland.



Photo 24. Non-wetland (NW100-10, 100-10) suspect area, confirmed upland.



Photo 25. Seasonal wetland (W4-10x, 10-10x) dominated by *Salix* sp.



Photo 26. Upland (U4-10x, 11-10x) adjacent to seasonal wetland.





Photo 27. Fresh emergent wetland (W01-10, 02-10) dominated by *Carex* sp. and *Polypogon monspeliensis*.



Photo 28. Upland (U01-10, 03-10) adjacent to fresh emergent wetland.



Photo 29. Fresh emergent wetland (W05-10x, 12-10x) dominated by *Typha* sp.



Photo 30. Upland (U05-10x, 13-10x) adjacent to fresh emergent wetland.



Photo 31. Ephemeral stream (D01-10, 01-10) adjacent to Hwy 395 in sagebrush.



Photo 32. Ephemeral stream (D201-10, 203-10) adjacent to Hwy 395 in sagebrush.



Photo. 33. Perennial stream (D105-10, 106-10) adjacent to Hwy 395 in riparian wetland.



Photo. 34. Perennial stream (D104-10, 107-10) adjacent to Hwy 395 in riparian wetland.





Photo 35. Riparian wetland (W6-10x, 14-10x) dominated by *Salix* sp.



Photo 36. Upland (U6-10x, 15-10x) adjacent to riparian wetland.



Photo 37. Ephemeral stream (D103-10, 106-10) adjacent to Hwy 395 in perennial grassland.



Photo 38. Non-wetland (NW2-10x, 16-10x) suspect area, confirmed to be upland.



Photo 39. Perennial stream (D102-10, 105-10) adjacent to Hwy 395 in sagebrush.



Photo 40. Riparian wetland (W100-10, 103-10) dominated by *Salix* sp.



Photo 41. Upland (U100-10, 104-10) adjacent to riparian wetland.



Photo 42. Perennial stream (D101-10, 102-10) adjacent to Hwy 395 in riparian wetland.





Photo 43. Ephemeral stream (D3-10x, 17-10x) adjacent to Hwy 395 in sagebrush.

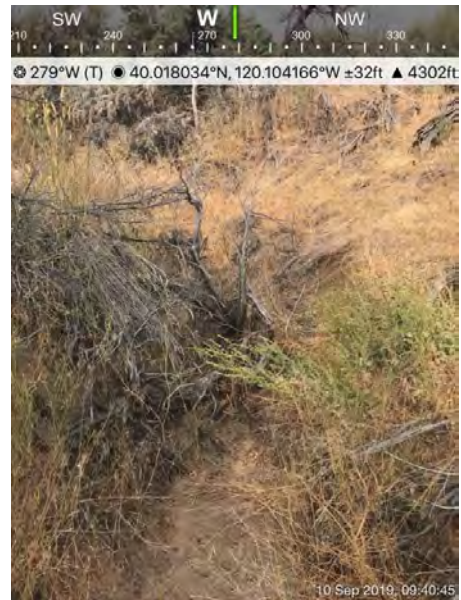


Photo 44. Ephemeral stream (D200-10, 202-10) adjacent to Hwy 395 in sagebrush and perennial grassland.



Photo 45. Intermittent stream (D100-10, 101-10) adjacent to Hwy 395 in sagebrush.

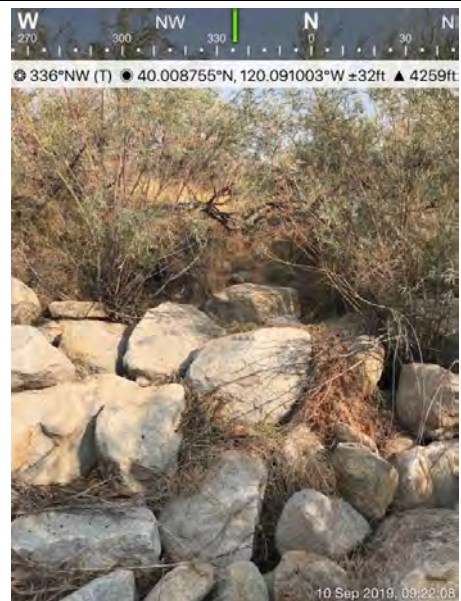


Photo 46. Intermittent stream (D200-10, 202-10) adjacent to Hwy 395 in sagebrush.



Photo 47. Riparian wetland (W200-10, 200-10) dominated by *Carex* sp.



Photo 48. Upland (U200-10, 200-10) adjacent to riparian wetland.



Photo 49. Non-wetland (NW3-10x, 18-10x) suspect area, confirmed upland.



Photo 50. Ephemeral stream (D4-10x, 21-10x) adjacent to Hwy 395 in sagebrush.



	
<p>Photo 51. Riparian/fresh emergent wetland complex (W09-10x, 19-10x) dominated by <i>Salix</i> sp.</p>	<p>Photo 52. Upland (U09-10x, 20-10x) adjacent to riparian/fresh emergent wetland complex.</p>
	
<p>Photo 53. Seasonal wetland (W11-10x, 22-10x) dominated by <i>Carex</i> sp.</p>	<p>Photo 54. Upland (U11-10x, 23-10x) adjacent to seasonal wetland.</p>

<p>Photo 55. Riparian wetland (W12-10x, 24-10x) dominated by <i>Salix</i> sp.</p>	<p>Photo 56. Upland (U12-10x, 25-10x) adjacent to riparian wetland.</p>
<p>Photo 57. Perennial stream (D107-10, 111-10) adjacent to Hwy 395 in riparian wetland.</p>	<p>Photo 58. Riparian wetland (W105-10, 112-10) dominated by <i>Carex</i> sp.</p>





Photo 59. Upland (U105-10, 113-10) adjacent to riparian wetland.





Photo 60. Riparian/fresh emergent wetland complex (W106-10, 114-10) dominated by *Carex* sp. and *Juncus* sp.



Photo 61. Upland (U106-10, 115-10) adjacent to riparian/fresh emergent wetland complex.



Photo 62. Perennial stream (D106-10, 110-10) adjacent to HWY 395 in sagebrush.

	
<p>Photo 63. Riparian/fresh emergent wetland complex (W10W103-10, 108-10) dominated by <i>Carex</i> sp. and <i>Salix</i> sp.</p>	<p>Photo 64. Upland (U103-10, 109-10) adjacent to riparian/fresh emergent wetland complex.</p>



## Segment 11

The following photos are documentation of conditions within the study area during the field delineation conducted from August 2019 to May 2020.

	
Photo 1. Fresh emergent wetland (W01-11x, 01-11x) in sagebrush.	Photo 2. Upland (U01-11x, 02-11x) adjacent to fresh emergent wetland.
	
Photo 3. Non-wetland (NW01-11, 07-11) suspect area, confirmed to be upland.	Photo 4. Non-wetland (NW01-11x, 03-11x) suspect area, confirmed to be upland.





Photo 5. Perennial stream (D04-11, 06-11) in perennial grassland and sagebrush.



Photo 6. Fresh emergent wetland (W02-11x, 04-11x) in perennial grassland and sagebrush.



Photo 7. Upland (U02-11x, 05-11x) adjacent to fresh emergent wetland.



Photo 8. Irrigation canal (D03-11, 03-11) adjacent to highway 395 in perennial grassland.



Photo 9. Fresh emergent wetland (W01-11, 04-11) dominated by *Schoenoplectus acutus*.



Photo 10. Upland (U01-11, 05-11) adjacent to fresh emergent wetland.



Photo 11. Intermittent stream (D02-11, 02-11) adjacent to highway 395 in riparian wetland.



Photo 12. Riparian wetland (W03-11, 08-11) with *Salix* sp. and *Juncus* sp.



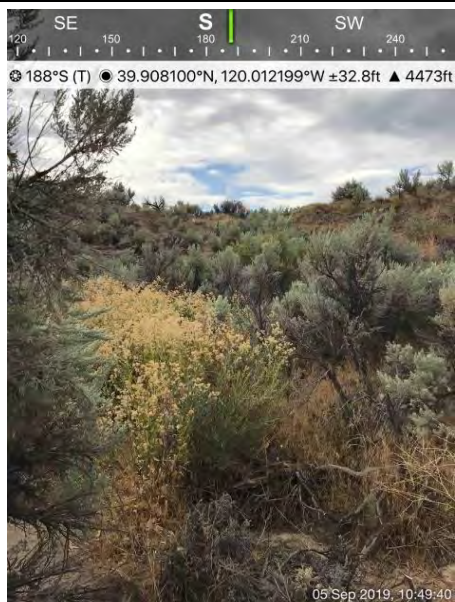


Photo 13. Upland (U03-11, 09-11) adjacent to riparian wetland.



Photo 14. Riparian/fresh emergent wetland complex soil profile (W03-11x, 06-11x), adjacent to highway 395.



Photo 15. Upland (U03-11x, 07-11x) adjacent to riparian/fresh emergent wetland complex.



Photo 16. Ephemeral stream (D100-11x, 100-11x) adjacent to highway 395 in sagebrush.





Photo 17. Fresh emergent wetland (W04-11x, 08-11x) dominated by *Carex* sp.



Photo 18. Upland (U04-11x, 09-11x) adjacent to fresh emergent wetland.

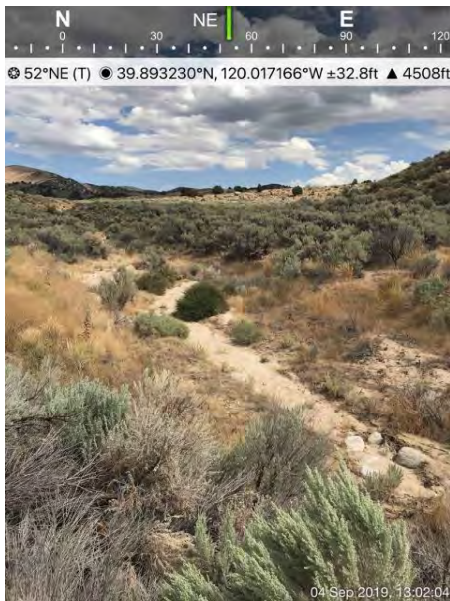


Photo 19. Intermittent stream (D01-11, 01-11) adjacent to Hwy 395 in sagebrush.



Photo 20. Ephemeral stream (D01-11x, 10-11x) adjacent to HWY 395 in perennial grassland.

	
<p>Photo 21. Ephemeral stream (D02-11x, 11-11x) adjacent to HWY 395 in sagebrush.</p> 	
<p>Photo 23. Ephemeral stream (D100-11, 100-11) with TOB the same as OHWM.</p>	<p>Photo 24. Ephemeral stream (D03-11x, 12-11x) adjacent to HWY 395 in sagebrush.</p>





Photo 25. Ephemeral stream (D17-11, 22-11) adjacent to HWY 395 in sagebrush and perennial grassland.



Photo 26. Ephemeral stream (D102-11, 102-11) adjacent to HWY 395 in sagebrush and perennial grassland.



Photo 27. Ephemeral stream (D103-11, 103-11) adjacent to HWY 395 in sagebrush and perennial grassland.



Photo 28. Ephemeral stream (D104-11, 104-11) adjacent to HWY 395 in sagebrush.





Photo 29. Upland (U06-11x, 14-11x) adjacent to fresh emergent wetland.



Photo 30. Vegetated ditch (D15-11, 20-11) adjacent to HWY 395 in sagebrush.

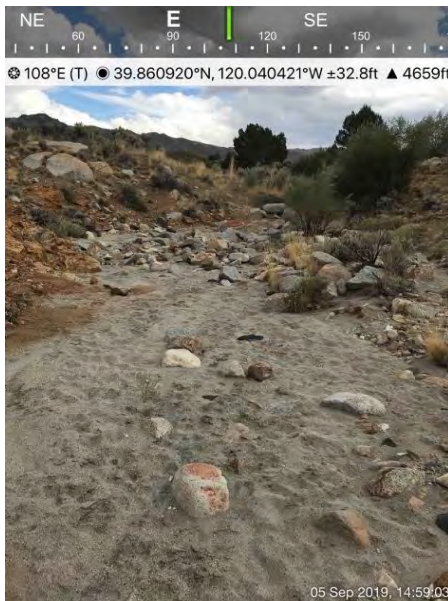


Photo 31. Intermittent stream (D14-11, 19-11) adjacent to HWY 395 in sagebrush.



Photo 32. Ephemeral stream (D04-11x, 15-11x) adjacent to HWY 395 in sagebrush.





Photo 33. Non-wetland (NW2-11x, 16-11x) suspect area, confirmed to be upland.



Photo 34. Vegetated ditch (D13-11, 18-11) adjacent to HWY 395 in sagebrush.

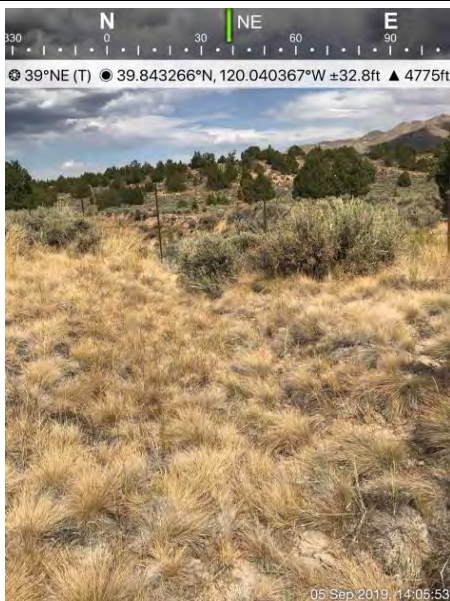


Photo 35. Vegetated ditch (D12-11, 17-11) adjacent to HWY 395 in sagebrush and perennial grassland.

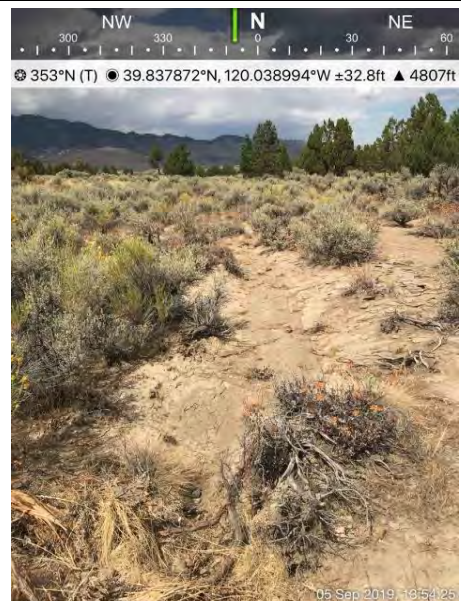


Photo 36. Ephemeral stream (D11-11, 16-11) adjacent to HWY 395 in sagebrush.





Photo 37. Ephemeral stream (D06-11, 11-11) adjacent to HWY 395 in sagebrush and perennial grassland.



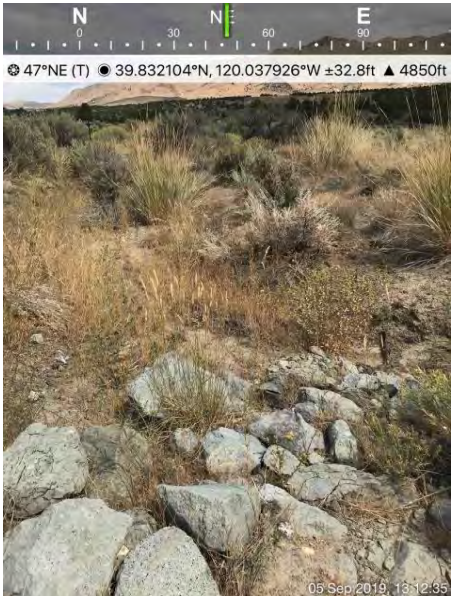
Photo 38. Ephemeral stream (D05-11, 10-11) adjacent to HWY 395 in perennial grassland.



Photo 39. Ephemeral stream (D16-11, 21-11) adjacent to HWY 395 in sagebrush.



Photo 40. Intermittent stream (D10-11, 15-11) adjacent to HWY 395 in sagebrush.

	<p>No Photograph</p>
<p>Photo 41. Ephemeral stream (D08-11, 13-11) adjacent to HWY 395 in sagebrush and perennial grassland.</p>	



## Segment 12

The following photos are documentation of conditions within the study area during the field delineation conducted from August 2019 to May 2020.

	
<p>Photo 1. Non-vegetated ditch (D01-12x, 01-12x) in sagebrush.</p> 	<p>Photo 2. Ephemeral stream (D100-12a, 100-12a) in sagebrush.</p> 
<p>Photo 3. Ephemeral stream (D01-12, 01-12) in perennial grassland.</p>	<p>Photo 4. Ephemeral stream (D02-12, 02-12) in perennial grassland.</p>





Photo 5. Non-vegetated ditch (D03-12, 03-12) in perennial grassland.



Photo 6. Ephemeral stream (D04-12, 04-12) adjacent to highway 395 in sagebrush.



Photo 7. Ephemeral stream (D05-12, 05-12) adjacent to highway 395 in sagebrush and perennial grassland.



Photo 8. Ephemeral stream (D06-12, 06-12) with TOB the same as OHWM.



Photo 9. Ephemeral stream (D07-12, 07-12) adjacent to highway 395 in sagebrush and perennial grassland.



Photo 10. Ephemeral stream (D08-12, 08-12) adjacent to highway 395 in sagebrush.





Photo 11. Ephemeral stream (D09-12, 09-12) adjacent to highway 395 in sagebrush and perennial grassland.



Photo 12. Ephemeral stream (D10-12, 10-12) adjacent to highway 395 in sagebrush and perennial grassland.



Photo 13. Ephemeral stream (D11-12, 11-12) with TOB the same as OHWM.



Photo 14. Ephemeral stream (D12-12, 12-12) adjacent to highway 395 in sagebrush.



Photo 15. Ephemeral stream (D13-12, 13-12) adjacent to highway 395 in sagebrush.



Photo 16. Ephemeral stream (D14-12, 14-12) with TOB the same as OHWM.



<div> </div>	<div> </div>
<p>Photo 17. Ephemeral stream (D15-12, 15-12) with TOB the same as OHWM.</p>	<p>Photo 18. Non-vegetated ditch (D16-12, 16-12) with TOB the same as OHWM.</p>
<div> </div>	<p>No Photograph</p>
<p>Photo 19. Ephemeral stream (D100-12b, 100-12b) in sagebrush.</p>	