ATTACHMENT E Nevada Wetland Delineation



Prineville-to-Reno Fiber Optic Project, Nevada Reroute Delineation of Aquatic Resources

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Prineville-to-Reno Fiber Optic Project Delineation of Potential Waters of the United States

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Executive Summary

On behalf of the Zayo Group, LLC, Stantec Consulting Services Inc. (Stantec) conducted a delineation of aquatic resources for the construction of a fiber optic line from Prineville, Oregon, to Reno, Nevada (project), specifically, a 3.4 mile section of the Nevada segment of the project which was moved to the north side of U.S. Highway 395 (US 395). The study area is in Washoe County, Nevada, and encompasses approximately 108 acres. The delineation was conducted in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (USACE 2008a). The field delineation was conducted from November 4, 2020, to November 6, 2020. A total of 1.840 acres (ac) (1,716 linear feet [If]) of potential waters of the United States were delineated and mapped within the study area, including riparian wetlands (1.304 ac), fresh emergent wetlands (0.012 ac) and intermittent streams (0.524 ac, 1,716 lf). Excluded features mapped in the study area total 0.412 acre (9,094 lf) and include ephemeral streams (0.162 ac, 2,219 lf) and non-vegetated ditches (0.250 ac, 6,875 lf).

The purpose of this delineation of waters of the United States is to document and describe waters of the United States to support an Approved Jurisdictional Determination from the U.S. Army Corps of Engineers (USACE). This delineation is subject to verification by the USACE, Sacramento District. Stantec advises all parties to treat the information contained herein as preliminary until the USACE provides written verification of the boundaries of its jurisdiction.

If USACE wishes to conduct a field verification, they do not need landowner permission as the study area is within the Nevada Department of Transportation right-of-way along US 395.

Abbreviations

ac	acre
CFR	Code of Federal Regulations
°F	degrees Fahrenheit
FAC	facultative
ft	foot/feet
lf	linear feet
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
NWPR	Navigable Waters Protection Rule
OHWM	ordinary high water mark
project	construction and operation of a fiber optic line from Prineville, Oregon, to Reno, Nevada
Stantec	Stantec Consulting Services Inc.
US 395	U.S. Highway 395
USACE	U.S. Army Corp of Engineers
USFWS	U.S. Fish and Wildlife Service
WETS	Wetland Station
WGS 84	World Geodetic System 1984



1.0 PROJECT LOCATION

The construction of a fiber optic line from Prineville, Oregon, to Reno, Nevada (project), specifically the new 3.4 mile section of the Nevada segment is located in the southern portion of Washoe County, Nevada. The study area encompasses approximately 108 acres (ac) and consists of a linear alignment running approximately 3.4 miles along the north side of U.S. Highway 395 (US 395) from near the west bound on ramp for exit 80 (Cold Springs Valley) to the west bound off ramp for exit 78 (Red Rock). The study is entirely within the US 395 Nevada Department of Transportation right-of-way. The study area is located within the following 7.5-minute U.S. Geological Survey quadrangles: *Reno NW* and *Verdi*.

The approximate center of the study area is located at latitude 39.635724°, longitude 119.941409° (World Geodetic System of 1984 [WGS 84]). The study area is shown in Appendix A (Figure 1).



2.0 ENVIRONMENTAL SETTING

2.1 CURRENT/RECENT LAND USE

The study area consists of and is bounded by residential, commercial, agricultural, and undeveloped properties.

2.2 SITE TOPOGRAPHY AND ELEVATION

The topography of the study area varies from flat valley floors to foothills. The study area is within Cold Spring Valley and Lemmon Valley, with the start and end of the reroute occurring along the valley floors. The majority of the reroute is within the foothills of the Granite Hills going through Dry Lake Summit. Within the study area, elevation ranges from about 5,000 feet (ft) to 5,400 ft mean sea level.

2.3 CLIMATE

Climate within the study area is based on historical weather data collected at Stead, Nevada, Wetland Station (WETS) (NOAA 2020). The WETS is located in southern Washoe County, approximately 0.35 mile north of the study area:

Type: The climate of the area is characterized as cold desert with cold, dry winters and hot, dry summers.

Precipitation: Precipitation in southern Washoe County occurs as both rain and snow. The average annual rainfall is approximately 10.66 inches, and the average annual snowfall is approximately 16.6 inches.

Air Temperature: Air temperatures in the study area range between an average January high of 44.2 degrees Fahrenheit (°F) and an average July high of 89.1°F. The annual average high is approximately 65.0°F.

Growing Season: The growing season (i.e., 50 percent probability of air temperature 28°F or higher) in the study area is approximately 174 days and occurs between April and October.

2.4 HYDROLOGY/HYDROLOGIC FEATURES

The primary hydrologic features in the study area include intermittent and ephemeral streams. All streams flowing through the study area west of Dry Lake Summit carry water to White Lake in Cold Springs Valley. White Lake is an alkaline lake that is usually dry throughout the year. East of Dry Lake Summit, water from the adjacent foothills flows through intermittent and ephemeral creeks to Silver Lake in Lemmon Valley, approximately 1 mile north of the study area.



2.5 SOIL MAP UNITS

Eleven soil map units occur in the study area. None of the soils are considered hydric; however, five soil map units have hydric components. They are described in the *Washoe County, Nevada, South Part Soil Survey* (NRCS 2020):

Table 1 includes the five soil map units in the study area with hydric components. Table 1 also provides the drainage class and depth to restrictive layer for the soil map units with hydric components. All soil map units within the study area are described in Appendix B and shown in Appendix A (Figures 2-1 through 2-7).

Table 1: Soil Map Units in the Study Area

Map Unit Name Taxonomy	Map Unit Reference Code	Drainage Class	Depth to Restrictive Layer (cm)	Hydric Soils
Northmore sandy loam, 4 to 8 percent slopes	202	Well drained	>200	No, except swales
Cassiro gravelly sandy loam, 2 to 4 percent slopes	250	Well drained	165	No, except swales
Cassiro gravelly sandy loam, 4 to 8 percent slopes	251	Well drained	165	No, except swales
Cassiro gravelly sandy loam, 8 to 15 percent slopes	252	Well drained	165	No, except swales
Fettic loam	831	Somewhat poorly drained	>200	No, except floodplains

Note:

cm = centimeters

2.6 VEGETATION COMMUNITIES

Vegetation communities are based on descriptions provided in *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer 1988). Four vegetation communities occur within the study area and are described below.

Montane Riparian. The montane riparian community occurs along streams throughout the study area. Within the study area, this community primarily dominated by riparian shrub species, including interior rose (*Rosa woodsii*), sandbar willow (*Salix exigua*), Lemmon's willow (*Salix lemmonii*), and Geyer's willow (*Salix geyeriana*), with the occasional Fremont cottonwood (*Populus fremontii*). Herbaceous species observed in riparian habitat include American brooklime (*Veronica americana*), willow dock (*Rumex salicifolius*), Chilean beard grass (*Polypogon australis*), and slender willow herb (*Epilobium ciliatum*).



Sagebrush. The sagebrush community occurs in a variety of topographic settings and is the most common vegetation community in the study area. This shrub community is characterized by big sagebrush (*Artemisia tridentata*) and is dominant in the shrub layer. In some stands it is the only dominant shrub species and occurs with grasses and forbs in the herbaceous layer, including crested wheatgrass (*Agropyron cristatum*), cheatgrass (*Bromus tectorum*), and curlycup gumweed (*Grindelia squarrosa*). In other stands, it co-dominates with rubber rabbitbrush (*Ericameria nauseosa*) and bitterbrush (*Purshia tridentata*).

Riverine. Riverine includes the non-vegetated portions of intermittent streams in the study area and consists of non-vegetated stream channels dominated by gravel and sand.

Barren. Under Mayer and Laudenslayer (1988), barren includes areas that naturally or artificially contains less than 2 percent herbaceous vegetation cover or less than 10 percent tree or shrub cover. In the study area, barren mainly occurs in areas that are not vegetated due to human activity and land use. These areas include roads and road shoulders.



3.0 METHODS

Stantec Consulting Services Inc. (Stantec) conducted an onsite routine delineation of wetlands and "other waters" of the United States based on field observations of positive indicators for wetland vegetation, hydrology, and soils; and indicators of an ordinary high water mark (OHWM). The routine delineation includes a standard 3-parameter pair of data points to determine wetland features, other waters, and uplands. This methodology is consistent with the approach outlined in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (USACE 2008a). Plant taxonomy follows *The Jepson Manual: Vascular Plants of California, Second Edition* (Baldwin et al. 2012), including applicable errata and revisions (Jepson Flora Project 2020). Stantec confirmed wetland indicator status' for plant species using *The National Wetland Plant List* (USACE 2008a). Presence of primary and secondary wetland hydrology indicators were documented for potential aquatic resources. The OHWM was determined using the approach outlined in *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2008b).

Soil pits were dug in representative wetland features, adjacent uplands, and suspect areas to a depth sufficient to document the presence or confirm the absence of hydric soil or wetland hydrology indicators. Soils were examined to assess field indicators of hydric soils. Stantec evaluated soils for positive indicators of hydric soils in the field following the criteria outlined in *Field Indicators of Hydric Soils in the United States* (Vasilas et al. 2018). Soil colors were determined using a Munsell soil color chart. The hydric status of each soil map unit occurring in the study area was reviewed using the *Web Soil Survey* (NRCS 2020).

Other waters are defined as traditional navigable waters and their tributaries (33 Code of Federal Regulations [CFR] 329). Delineation of other waters was based on presence of an OHWM as defined in U.S. Army Corps of Engineers (USACE) regulations (33 CFR 328.3 and 33 CFR 328.4). Physical characteristics of an OHWM include but are not limited to the following conditions: a natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, presence of litter and debris, leaf litter disturbed or washed away, scour, deposition, presence of bed and bank, and water staining. At least one data point was selected to best represent the OHWM of other waters for each other waters' type. These data points were used to collect information regarding the OHWM, along with dominant substrate, anthropogenic influences, and other features (floodplain, low flow channel, etc.) associated with the other waters' type.

Prior to conducting the onsite routine delineation, the U.S. Fish and Wildlife Service's National Wetlands Inventory (NWI) Wetlands Mapper (USFWS 2020) was reviewed to determine if any surface water and wetland features were previously mapped in the study area and general vicinity. Surface water and wetland features within the NWI are described by the Cowardin et al. (1979) system, as amended by subsequent updates (Federal Geographic Data Committee 2013). Non-riparian features delineated during the onsite routine delineation were classified using the Cowardin et al. (1979) system based on existing NWI mapping or assigned a Cowardin type if not previously mapped. Stantec used the U.S. Fish and



Wildlife Service's A System for Mapping Riparian Areas in the Western United States to classify riparian features (USFWS 2009). The USACE Aquatic Resources Excel spreadsheet, which includes specific information about the wetland and other waters features delineated including their Cowardin or riparian type, was completed and is included in Appendix C.

Ten data points were established in the study area and were used to characterize and document each wetland, the adjacent upland or other water feature type, and suspect areas. In situations where wetland and other water features supported similar characteristics (e.g., vegetation composition, indicators of hydrology, or OHWM indicators) one set of data points was collected and applied to similar features. The boundaries of delineated features and the associated data points were mapped using a sub-meter-accurate Arrow Global Positioning Service Unit paired with Apple iPhone loaded with Collector for ArcGIS. All spatial data were collected in the WGS 84 datum. Field data were collected from November 4, 2020 to November 6, 2020.

3.1 NAVIGABLE WATERS PROTECTION RULE AND EXCLUDED FEATURES

The Navigable Waters Protection Rule (NWPR) went into effect on June 22, 2020, in all states and jurisdictions except the State of Colorado and replaces all previous agency guidance documents, memoranda, and materials. The NWPR establishes the limit of federal regulatory authority by defining "waters of the United States" as follows:

- The territorial seas, and waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including waters which are subject to the ebb and flow of the tide;
- Tributaries;
- Lakes and ponds, and impoundments of jurisdictional waters; and
- Adjacent wetlands.

The NWPR specifically clarifies that "waters of the United States" do not include the following:

- Groundwater, including groundwater drained through subsurface drainage systems;
- ephemeral features that flow only in direct response to precipitation, including ephemeral streams, swales, gullies, rills, and pools;
- diffuse stormwater runoff and directional sheet flow over upland;
- ditches that are not traditional navigable waters, tributaries, or that are not constructed in adjacent wetlands, subject to certain limitations;
- prior converted cropland;
- artificially irrigated areas that would revert to upland if artificial irrigation ceases;



- artificial lakes and ponds that are not jurisdictional impoundments and that are constructed or excavated in upland or non-jurisdictional waters;
- water-filled depressions constructed or excavated in upland or in non-jurisdictional waters incidental to mining or construction activity, and pits excavated in upland or in non-jurisdictional waters for the purpose of obtaining fill, sand, or gravel;
- stormwater control features constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store stormwater run-off;
- groundwater recharge, water reuse, and wastewater recycling structures constructed or excavated in upland or in non-jurisdictional waters; and
- waste treatment systems.

To provide further clarity the NWPR provides regulatory definitions for key terms including the following:

- Tributary A river, stream, or similar naturally occurring surface water channel that contributes surface water flow to a water of the United States in a typical year either directly or through one or more "waters of the United States". A tributary must be perennial or intermittent in a typical year. The alteration or relocation of a tributary does not modify its jurisdictional status as long as it continues to satisfy the flow conditions of this definition. A tributary does not lose its jurisdictional status if it contributes surface water flow to a downstream jurisdictional water in a typical year through a channelized non-jurisdictional surface water feature, through a subterranean river, through a culvert, dam, tunnel, or similar artificial feature, or through a debris pile, boulder field, or similar natural feature. The term tributary includes a ditch that either relocates a tributary, is constructed in a tributary, or is constructed in an adjacent wetland as long as the ditch satisfies the flow conditions of this definition.
- Ephemeral surface water flowing or pooling only in direct response to precipitation, such as rain or snow fall.
- Intermittent surface water flowing continuously during certain times of the year and more than in direct response to precipitation (e.g., seasonally when the groundwater table is elevated or when snowpack melts). Where "certain times of the year" means extended periods (i.e., weeks or months) of predictable, continuous surface flow occurring in the same geographic feature year after year.
- Perennial surface water flowing continuously year-round.
- Ditch a constructed or excavated channel used to convey water.



4.0 **RESULTS AND DISCUSSION**

Potential waters of the United States occur in the study area as wetlands and other waters. Wetlands include riparian wetland and fresh emergent wetland. Other waters include intermittent streams.

The boundaries and areas of potential waters of the United States occurring in the study area are illustrated in Appendix A (Figure 3). A total of 1.841 ac of potential waters of the United States were delineated. A summary of the delineated potential waters of the United States is presented in Table 2. Routine wetland and OHWM determination data forms are presented in Appendix D. A plant list is provided in Appendix E. Representative photographs of the delineated features and data point locations are presented in Appendix F.

Table 2: Potential Waters of the United States Summary

Potential Waters of the United States	Total Acres	Total Linear Feet	Cowardin Type ¹
Wetlands			
Riparian Wetland	1.304	N/A	RP1SS
Fresh Emergent Wetland	0.012	N/A	RP1EM
Other Waters			
Intermittent Stream	0.524	1,716	R4SB
Total Potential Waters of the United States	1.840	1,716	N/A

Notes:

1. Cowardin et al. 1979; USFWS 2009 N/A = not applicable RP1EM = Palustrine Emergent RP1SS = Palustrine Scrub-Shrub

R4SB = Riverine Intermittent, Streambed

4.1 WETLANDS

4.1.1 Riparian Wetland

Riparian wetlands occur along intermittent streams within the study area. These features generally include a shrub stratum and an herbaceous stratum within the stream channel. Dominant plant species occurring in these features include sandbar willow, Lemmon's willow, Geyer's willow, willow dock, Chilean beard grass, and slender willow herb which collectively satisfy the hydrophytic vegetation criterion. Wetland hydrology is provided by evidence of frequent flooding including sediment deposits (B2), drift



deposits (B3) drainage patterns (B10) and long-duration saturation indicated by facultative (FAC)-neutral test (D5). Hydric soils are problematic in that these features occur within the OHWM of intermittent streams and the soils lacked typical hydric soil indicators likely due to the seasonal and annual depositions of new soil material, low iron and manganese content, and low organic matter content.

4.1.2 Fresh Emergent Wetland

One fresh emergent wetlands occurs within an intermittent stream channel. It is dominated by one species that satisfies the hydrophytic vegetation criterion: broad-leaf cattail (*Typha latifolia*). Primary indicators of wetland hydrology include a high water table at 6 inches (A2) and saturation at the soil surface (A3). Other indicators observed provide evidence of frequent flooding including sediment deposits (B2), drift deposits (B3) and long-duration saturation indicated by FAC-neutral test (D5). The hydric soil criterion is met through the observation of a depleted matrix (F3).

4.2 OTHER WATERS

4.2.1 Intermittent Stream

Intermittent streams include natural drainages that exhibit an OHWM and convey waters intermittently during the late fall, winter, and spring months. Hydrology is provided by both precipitation and groundwater discharge. Larger intermittent streams may support a well-developed riparian corridor. Unnamed intermittent streams occur throughout the study area and are characterized as bed and bank features that exhibit indicators of an OHWM, including a break in bank slope; water marks on rocks; and change in average sediment texture, vegetation species, and vegetation cover. Dominant substrate ranges from sand to cobbles. OHWM width ranges from 1 to 14 ft and depth ranges from 0.4 to 6 ft.

4.3 EXCLUDED FEATURES

This delineation report was prepared to support an Approved Jurisdictional Determination from the USACE. As such, aquatic resources that meet wetland criteria or exhibit an OHWM but that do not meet the definition of waters of the United States as defined by the NWPR were classified and mapped as excluded features.

Excluded features occur in the study area as ephemeral streams and non-vegetated ditches and occupy a total of 0.412 ac. Table 3 provides a summary of excluded features and their locations are shown on Figure 3, Appendix A.



Table 3: Excluded Features Summary

Excluded Features	Total Acres	Total Linear Feet	Cowardin Type ¹
Ephemeral Stream	0.162	2,219	R4
Non-Vegetation Ditch	0.250	6,263	R4
Total Excluded Features	0.412	9,094	N/A

Notes:

1. Cowardin et al. 1979

R4 = Riverine Intermittent

4.3.1 Ephemeral Stream

Ephemeral streams include natural drainages that exhibit an OHWM and convey waters during and directly after precipitation events. These drainage channels are usually located above the groundwater reservoir and lack a well-developed riparian corridor. Ephemeral streams occur throughout the study area and are characterized as bed and bank features that exhibit indicators of an OHWM, including a break in bank slope and change in average sediment texture, vegetation species, and vegetation cover. Dominant substrate ranges from cobble and pebbles to sand. OHWM and top of bank width ranges from 1 to 8 ft, and depth ranges from 0.4 to 1.5 ft.

4.3.2 Non-Vegetated Ditch

Non-vegetated ditches are human-made linear features that support ephemeral or intermittent flow but lack hydrophytic vegetation within the ditch. Non-vegetated ditches occur throughout the study area and are characterized as a bed and bank feature that exhibit indicators of an OHWM, including break in bank slope, and change in average sediment texture and vegetation cover. Dominant substrate ranges from gravel, sand, and hardscape (i.e., asphalt from old road bed). OHWM width ranges from 1 to 3 ft, and depth ranges from 0.25 to 3 ft. These ditches receive roadside runoff from US 395 or were constructed to intercept sheet flow from eroding the road cut for US 395.



5.0 CONCLUSION

Potential waters of the United States delineated within the study area occupy a total of 1.840 ac, 1,716 lf and include wetlands and other waters. Excluded features occupy a total of 0.412 ac, 9094 lf and include other waters. Table 4 provides a summary of all aquatic resources.

Table 4: Aquatic Resources	Summary Table
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Potential Waters of the United States	Total Acres	Total Linear Feet	
Wetlands	1.316	N/A	
Other Waters	0.524	1,716	
Total Potential Waters of the United States	1.840	1,716	
Excluded Features			
Other Waters	0.412	9,094	

Determinations of waters of the United States, including wetlands, are based on current conditions, (i.e., normal circumstances) and were made in accordance with relevant U.S. Environmental Protection Agency and USACE guidance. Determinations are subject to verification by the USACE. Stantec advises all interested parties to treat the information contained herein as preliminary pending written verification of jurisdictional boundaries by the USACE.



6.0 **REFERENCES**

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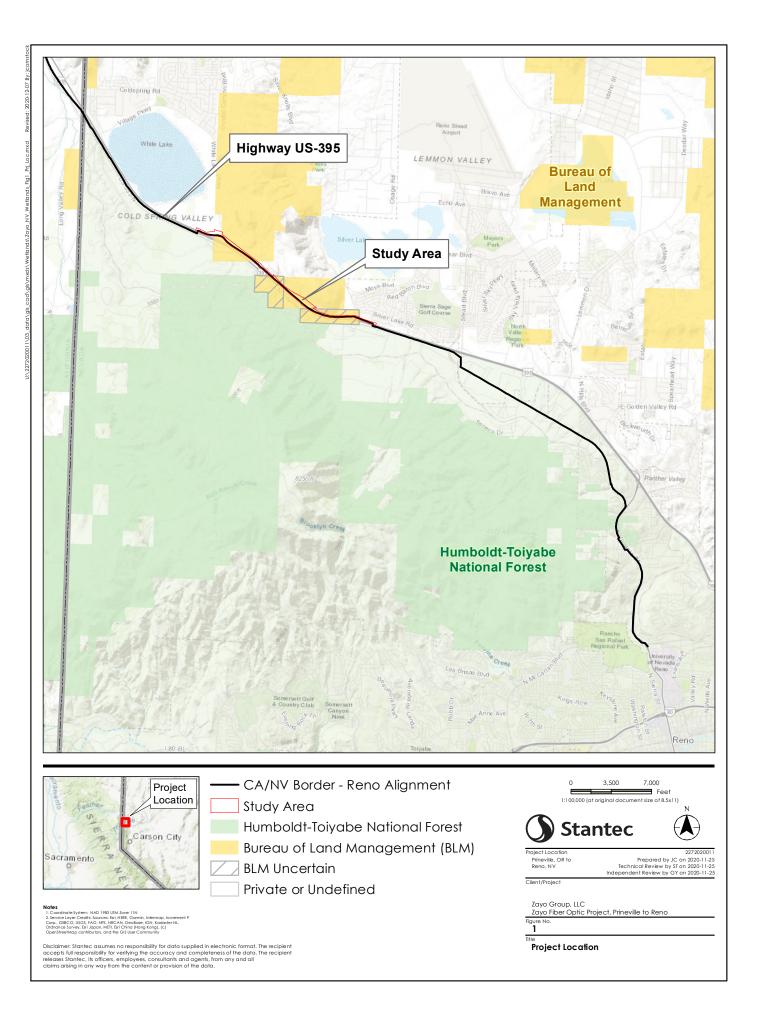
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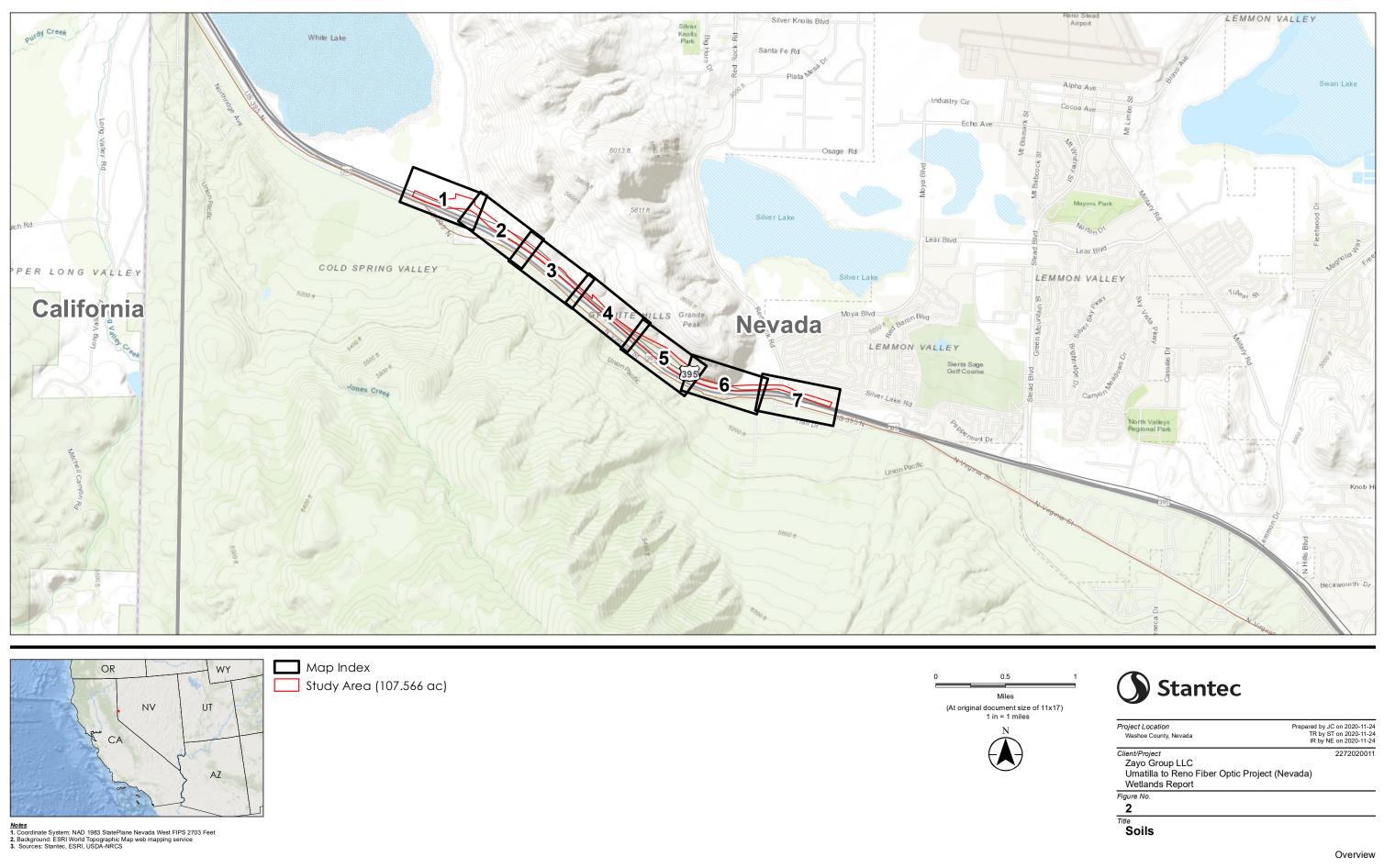


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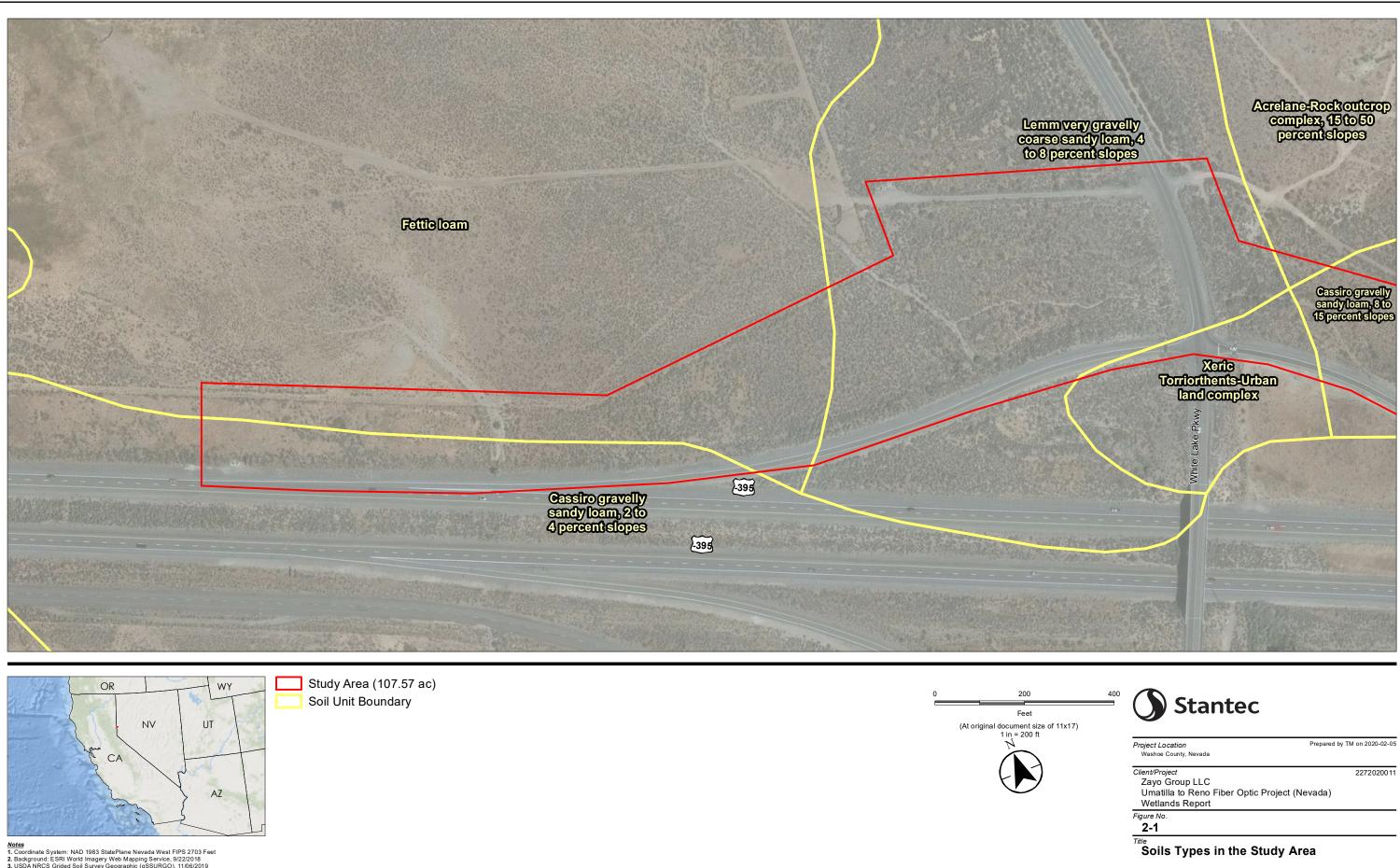


APPENDIX A FIGURES



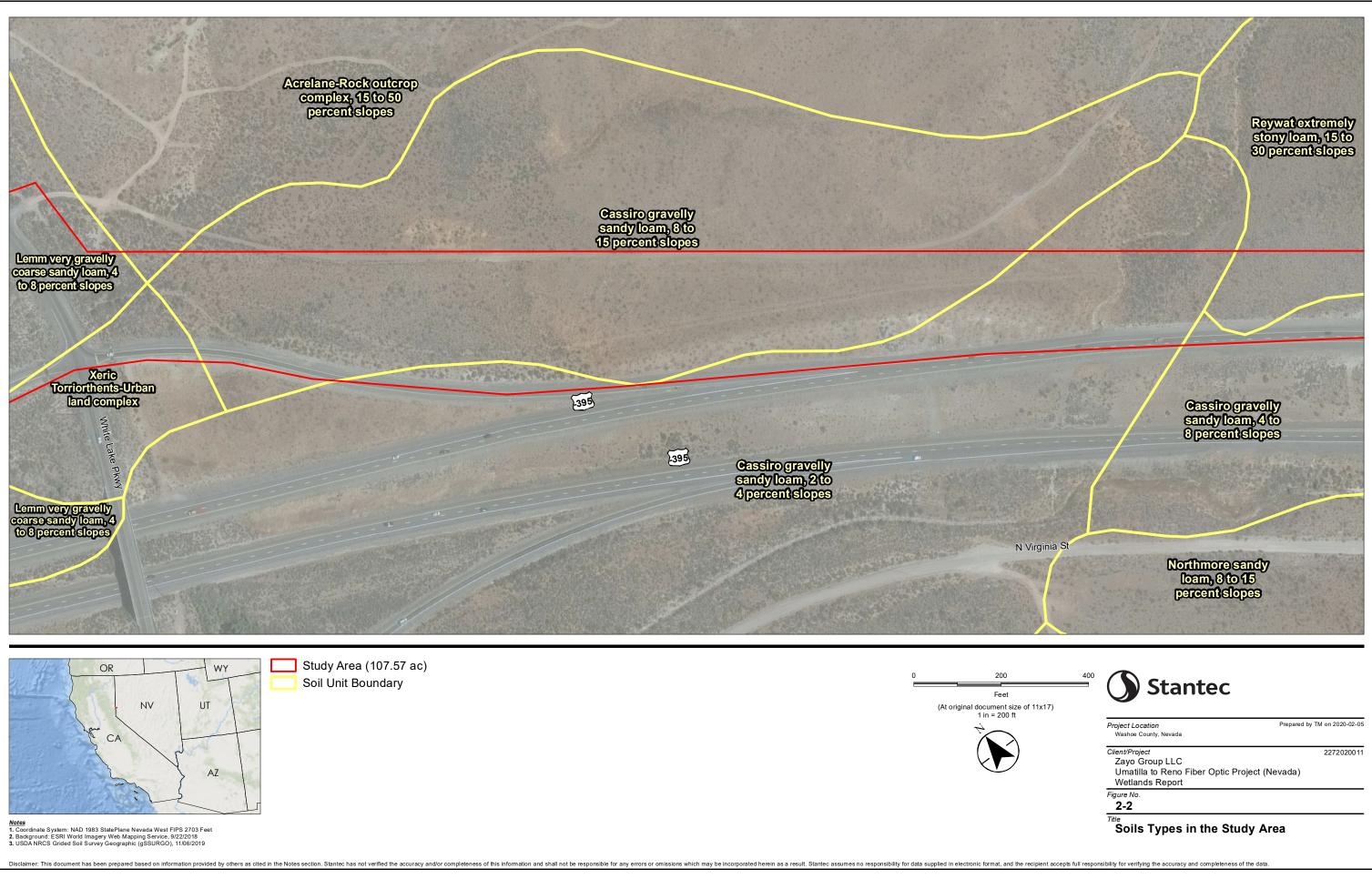


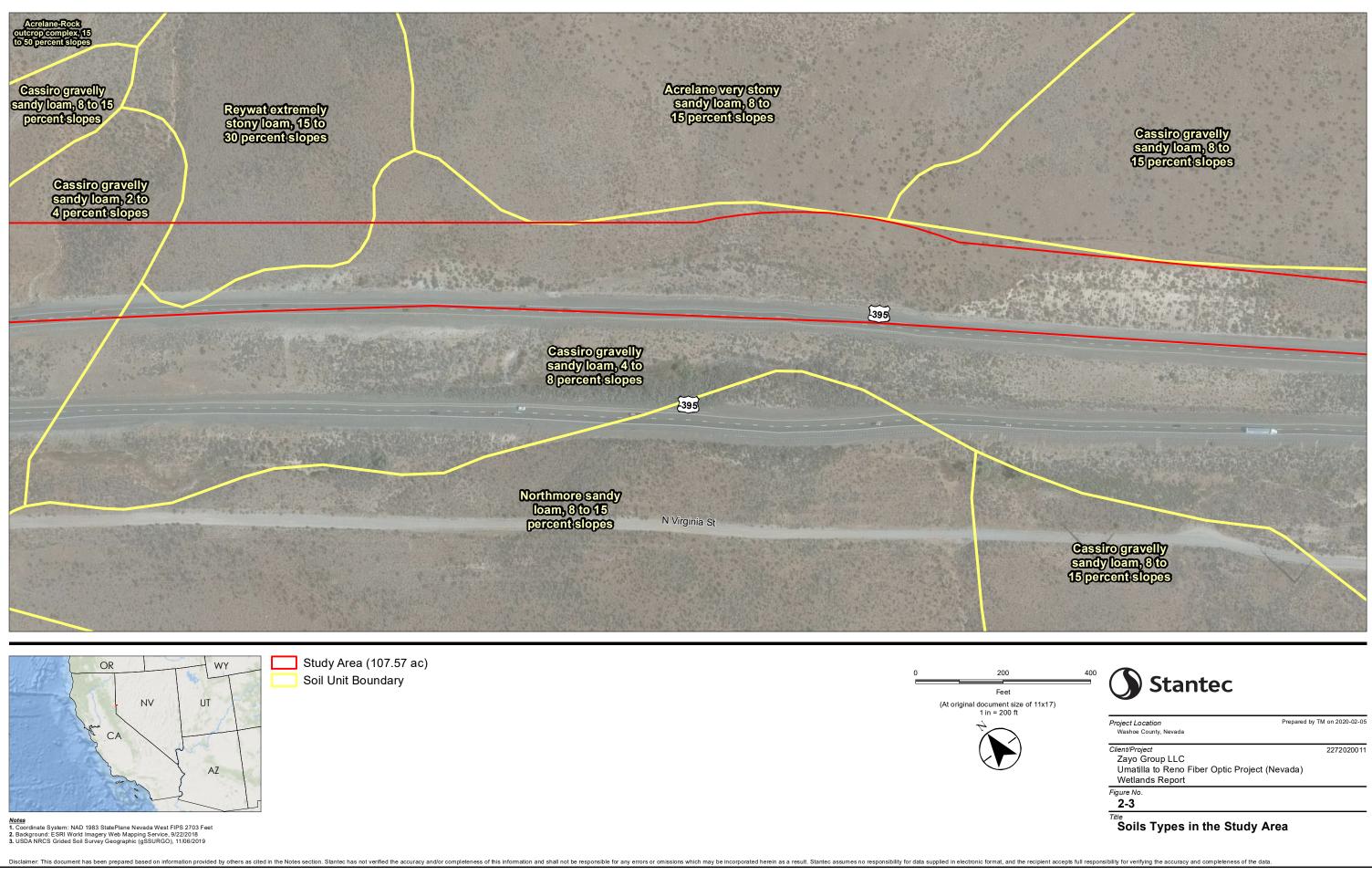
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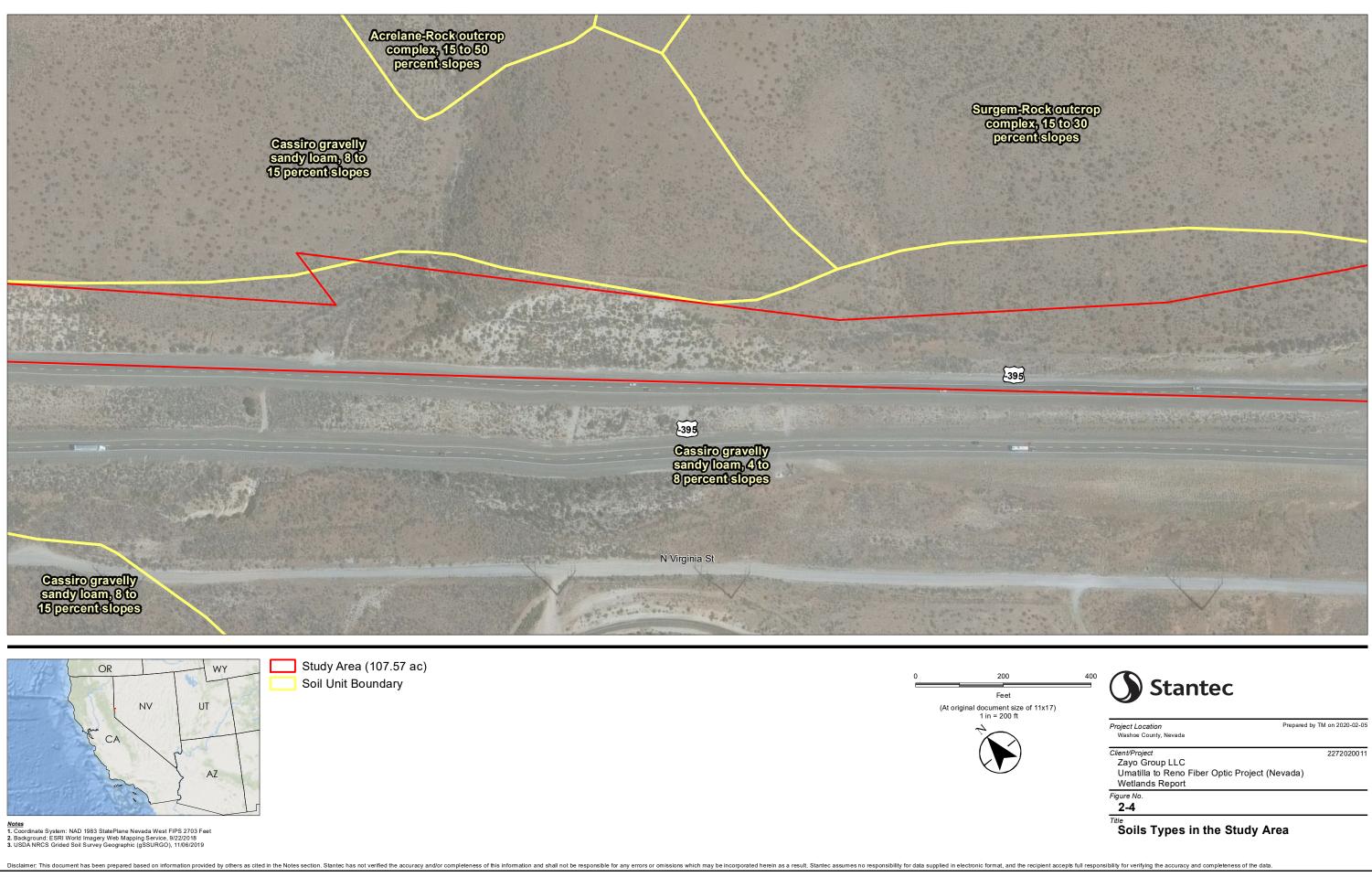


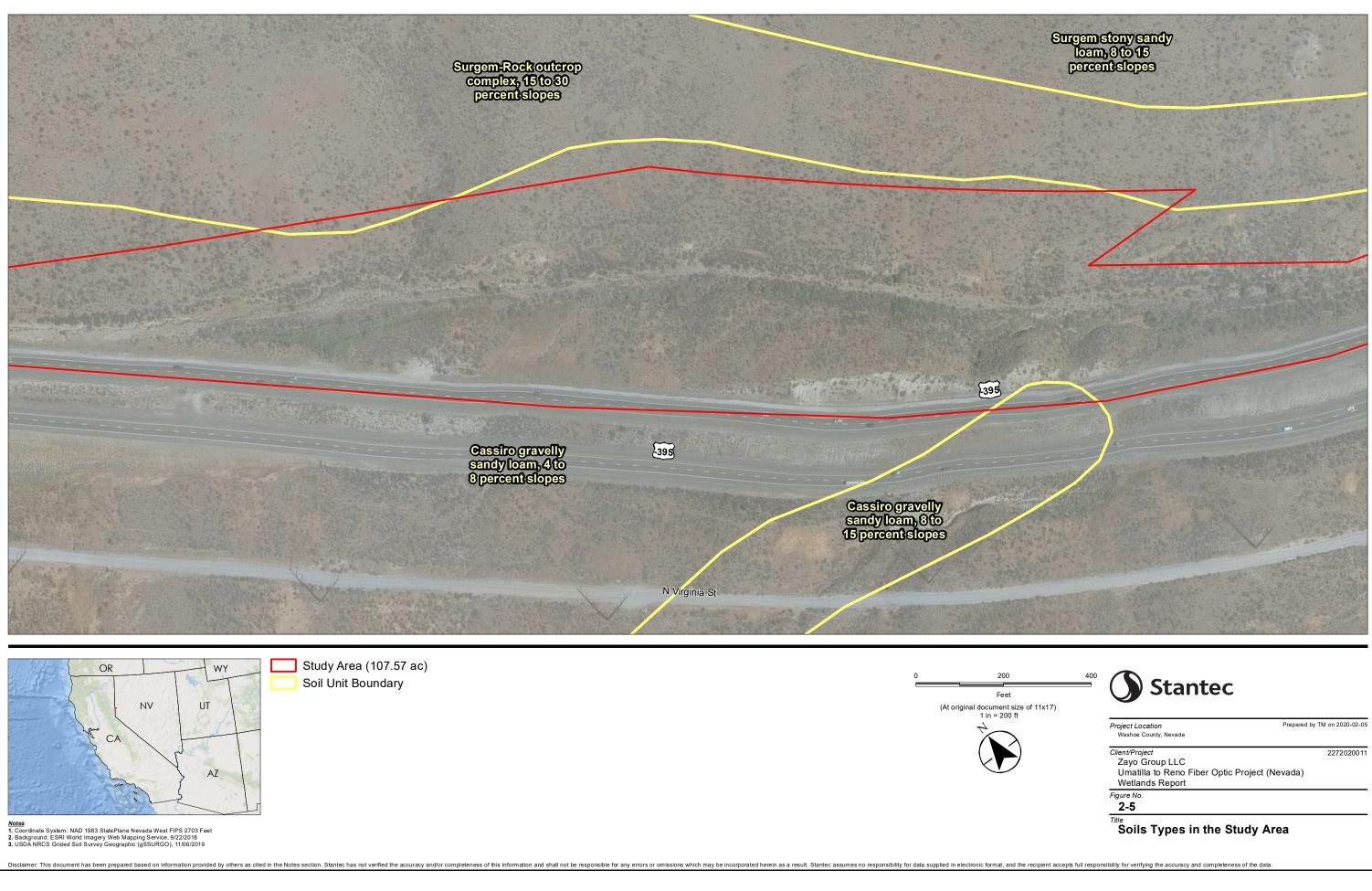
<u>Notes</u> 1. Cordinate System: NAD 1983 StatePlane Nevada West FIPS 2703 Feet 2. Background: ESRI World Imagery Web Mapping Service, 9/2/2018 3. USDA NRCS Grided Soil Survey Geographic (gSSURGO), 11/06/2019

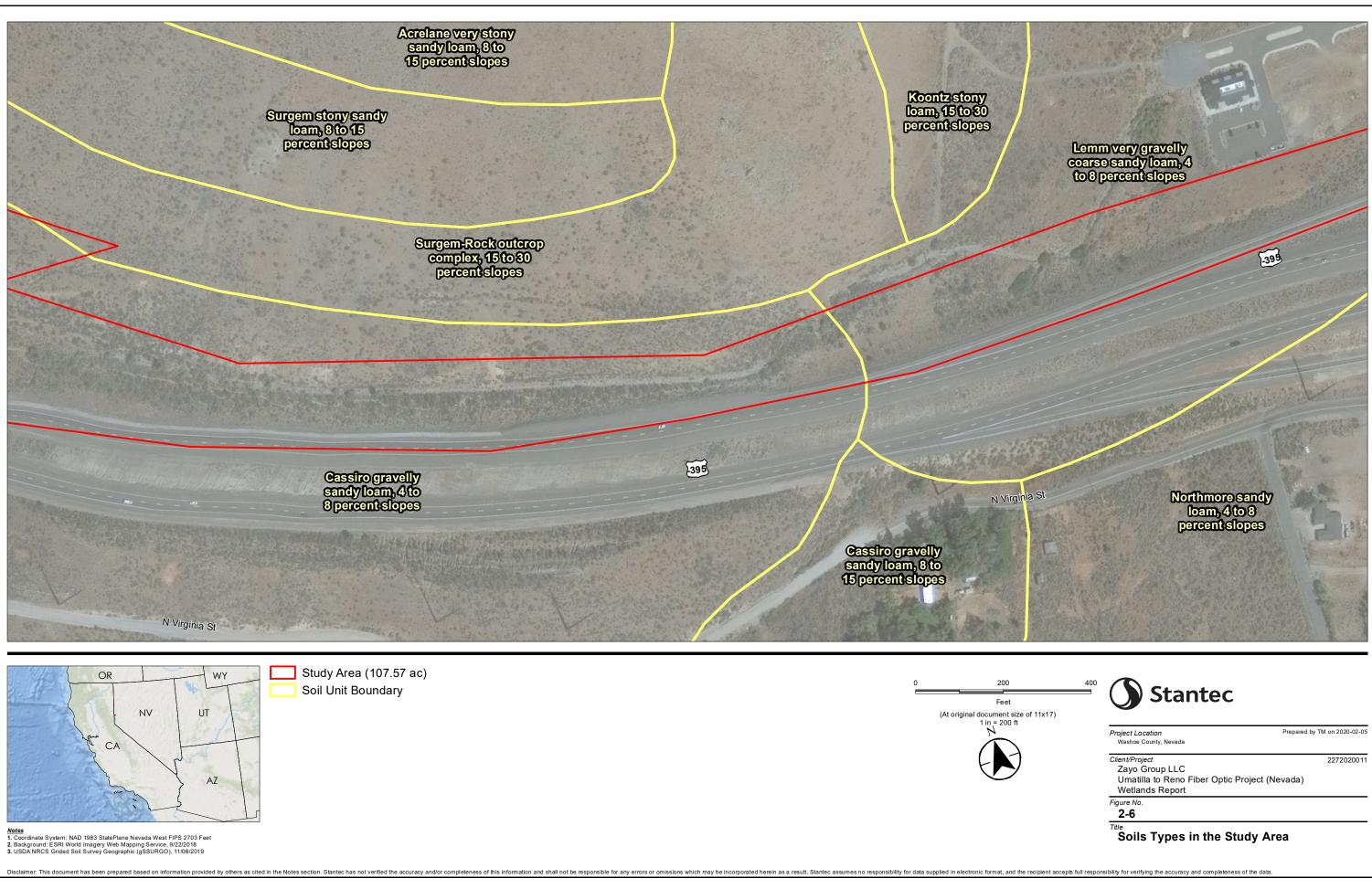
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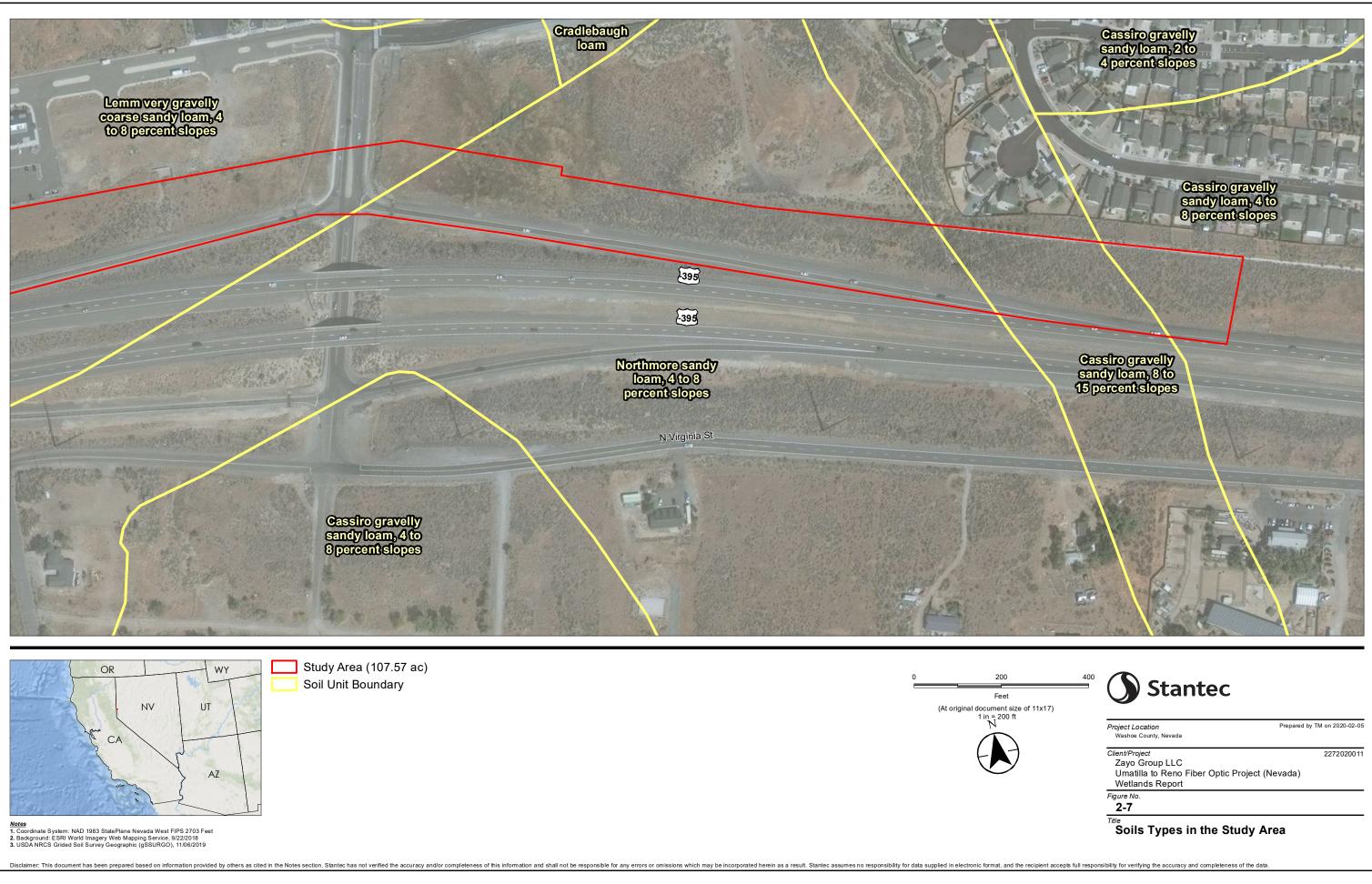


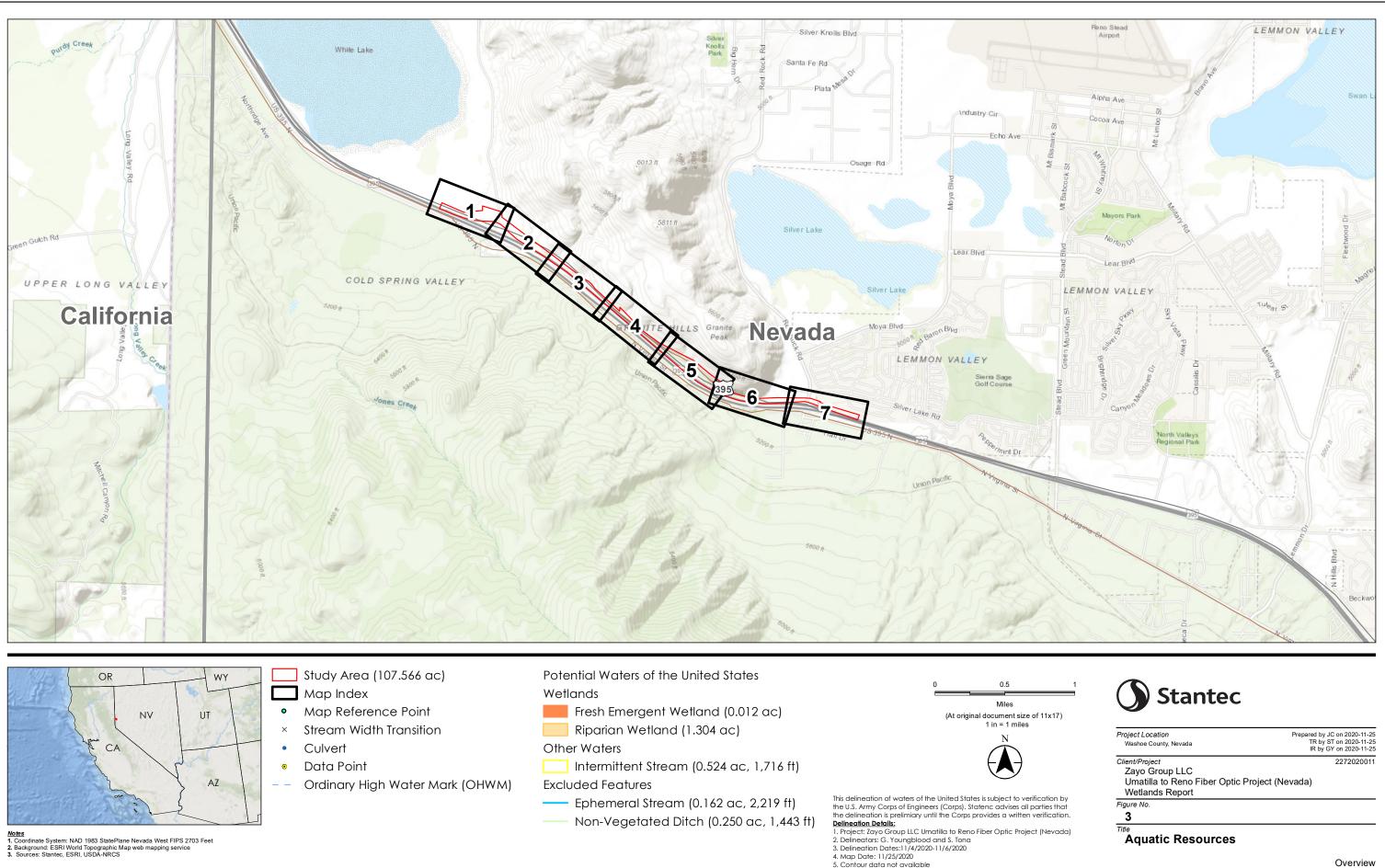










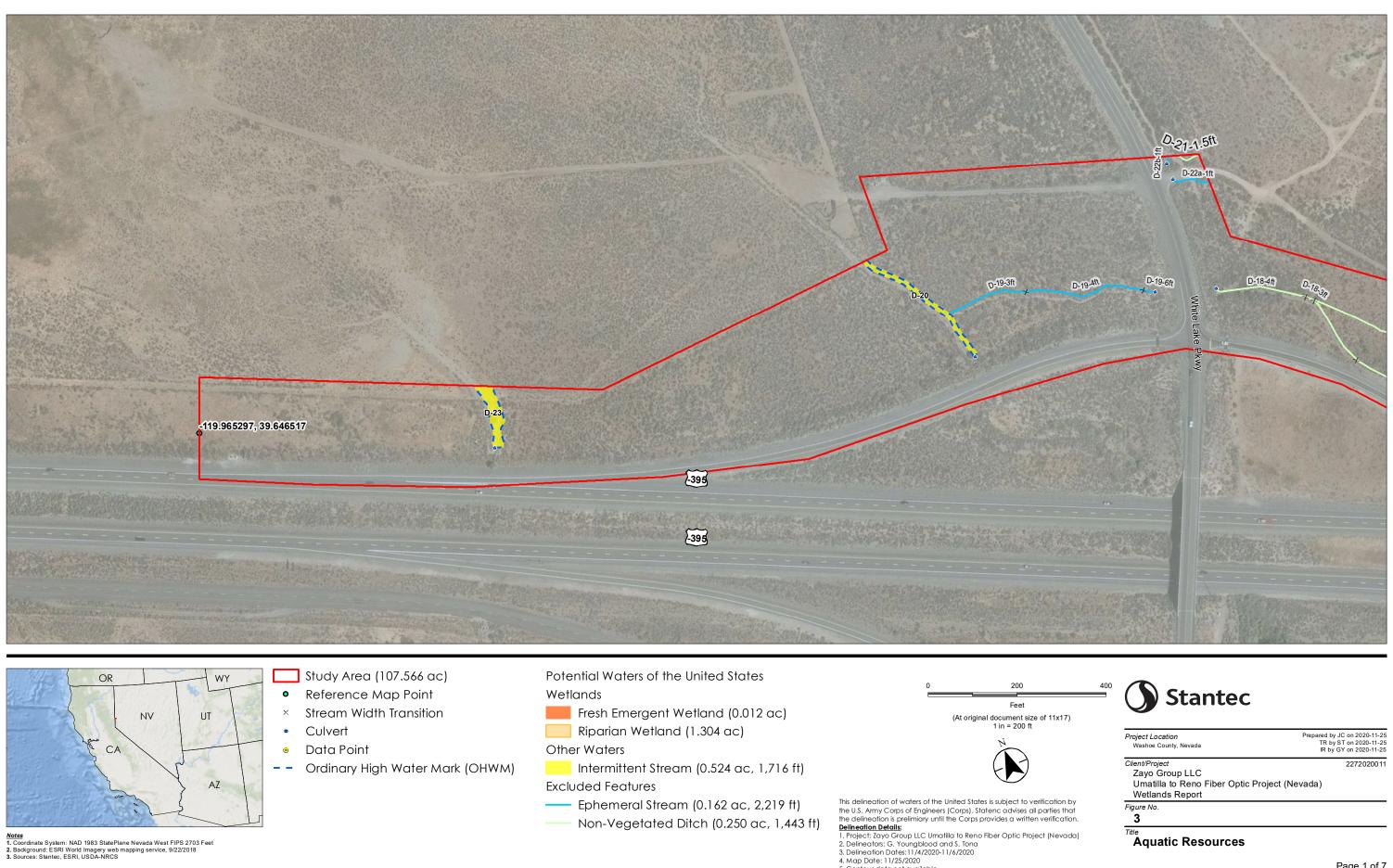






5. Contour data not available

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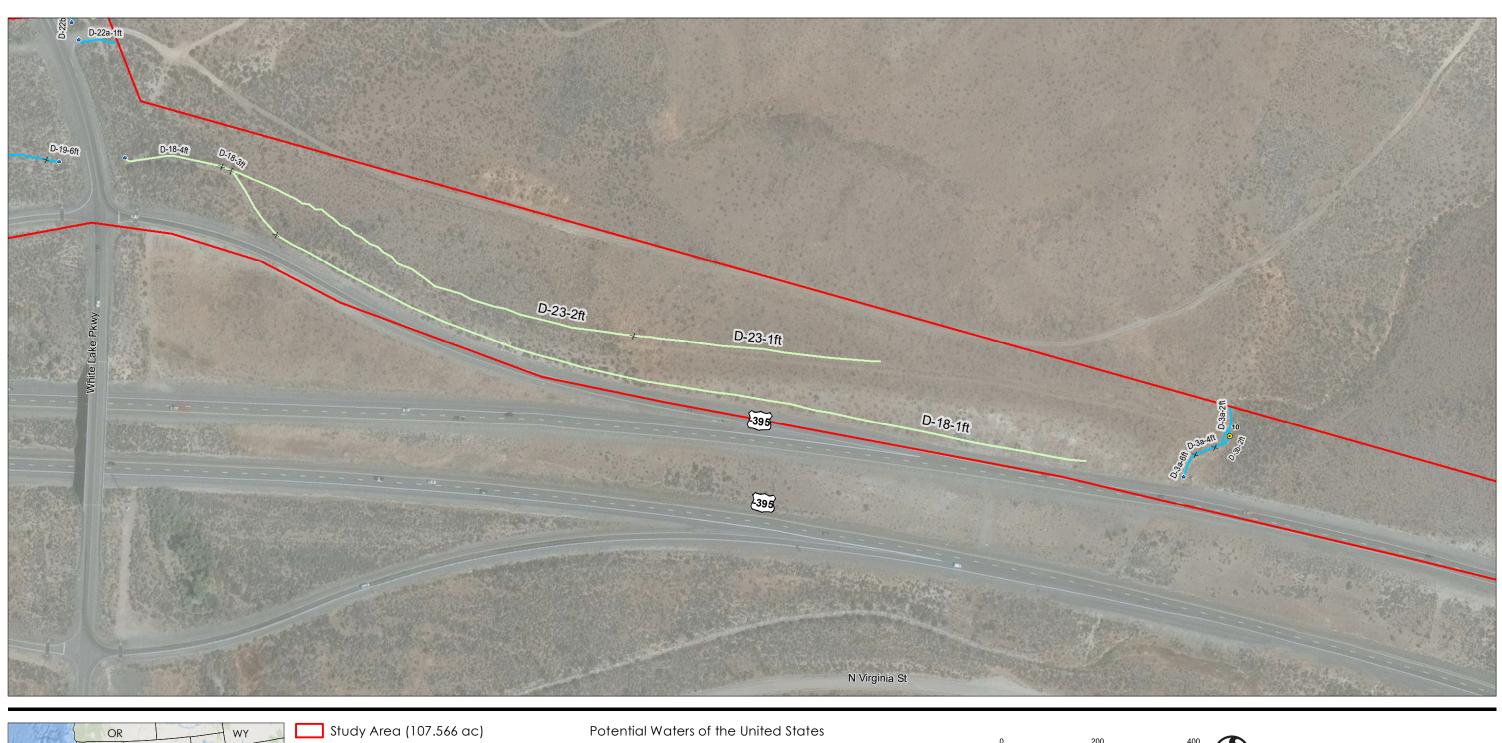




4. Map Date: 11/25/2020 5. Contour data not available

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- Reference Map Point
- Stream Width Transition ×
- Culvert •
- Data Point ۲
- Ordinary High Water Mark (OHWM) - -

Wetlands

- Fresh Emergent Wetland (0.012 ac)
- Riparian Wetland (1.304 ac)
- Other Waters
- Intermittent Stream (0.524 ac, 1,716 ft) **Excluded Features**
- Ephemeral Stream (0.162 ac, 2,219 ft)
- Non-Vegetated Ditch (0.250 ac, 1,443 ft)

200 Feet

(At original document size of 11x17) 1 in = 200 ft



This delineation of waters of the United States is subject to verification by the U.S. Army Corps of Engineers (Corps). Statenc advises all parties that the delineation is prelimiary until the Corps provides a written verification. **Delineation Details**: I. Project: Zayo Group LLC Umatilla to Reno Fiber Optic Project (Nevada)
 2. Delineators: G. Youngblood and S. Tona
 3. Delineation Dates: 11/4/2020-11/6/2020

4. Map Date: 11/25/2020

5. Contour data not available

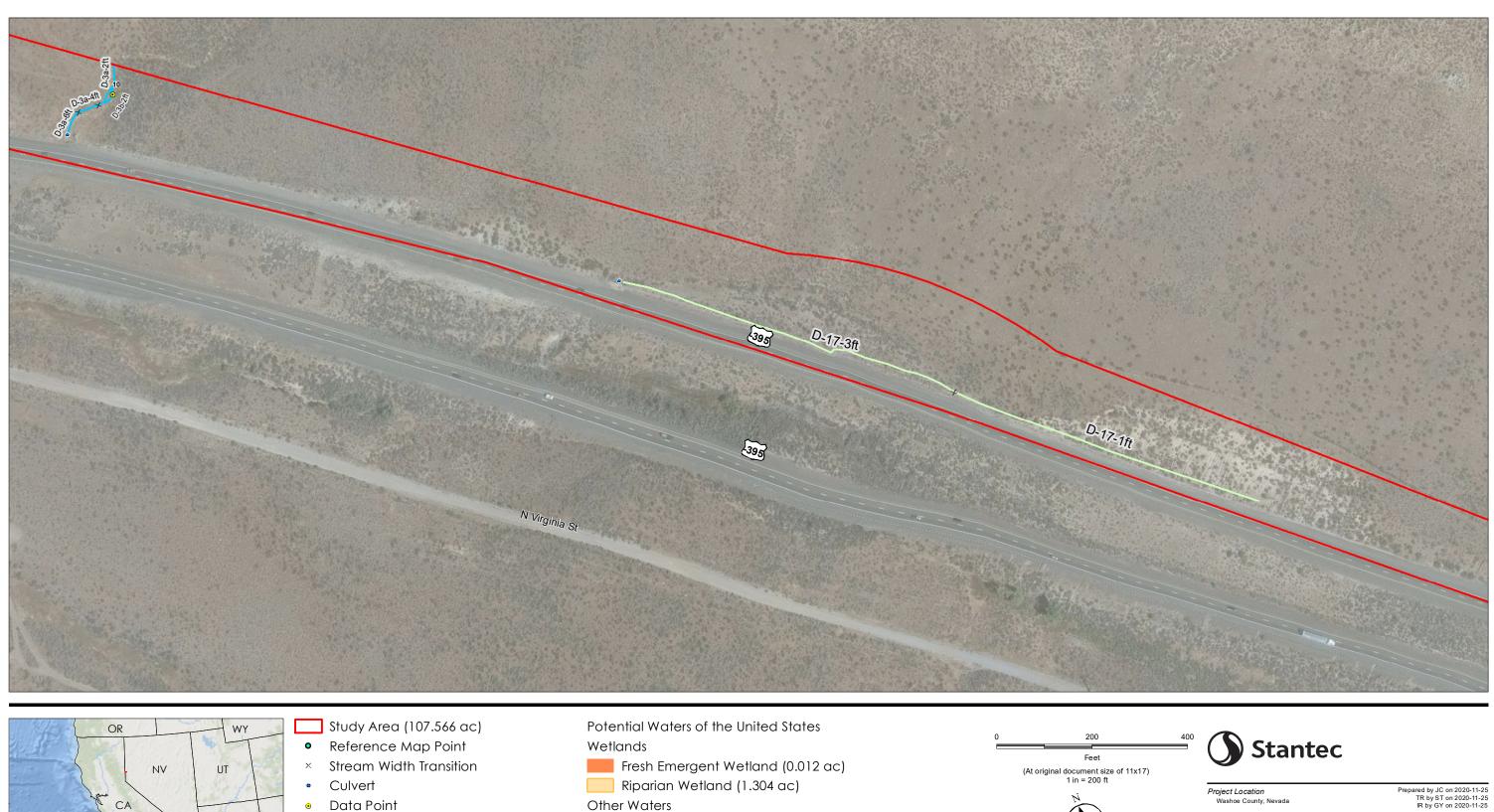
Notes 1. Coordinate System: NAD 1983 StatePlane Nevada West FIPS 2703 Feet 2. Background: ESRI World Imagery web mapping service, 9/22/2018 3. Sources: Stantec, ESRI, USDA-NRCS

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Stantec

Prepared by JC on 2020-11-25 TR by ST on 2020-11-25 IR by GY on 2020-11-25 Project Location Washoe County, Nevada Client/Project 2272020011 Zayo Group LLC Umatilla to Reno Fiber Optic Project (Nevada) Wetlands Report Figure No. 3 Title Aquatic Resources

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- Data Point ۲
- Ordinary High Water Mark (OHWM) - -

- Other Waters
- Intermittent Stream (0.524 ac, 1,716 ft) **Excluded Features**
- Ephemeral Stream (0.162 ac, 2,219 ft)
- Non-Vegetated Ditch (0.250 ac, 1,443 ft)



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Title Aquatic Resources

Client/Project

Figure No.

3

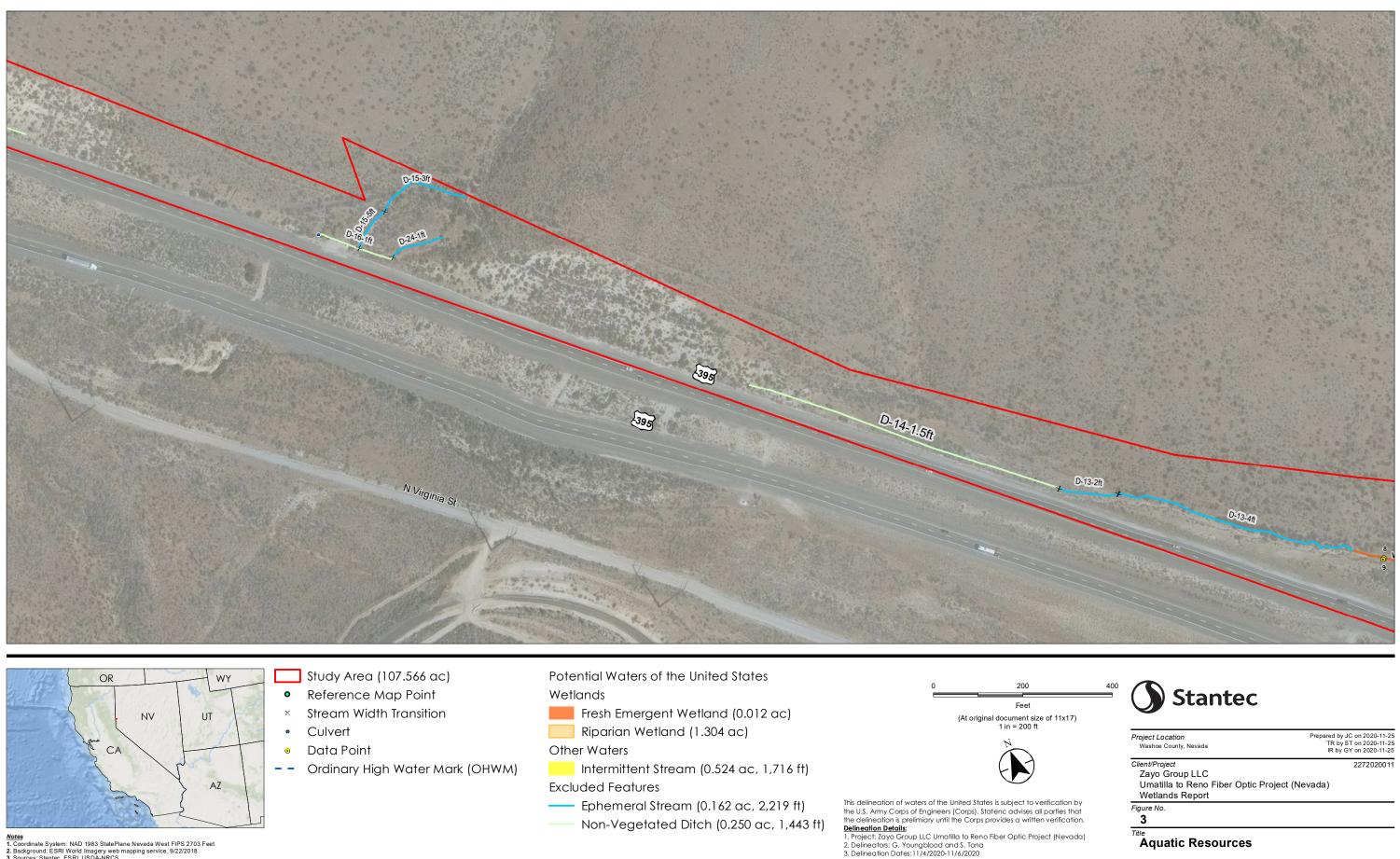
Zayo Group LLC

Wetlands Report

Umatilla to Reno Fiber Optic Project (Nevada)

Page 3 of 7

2272020011





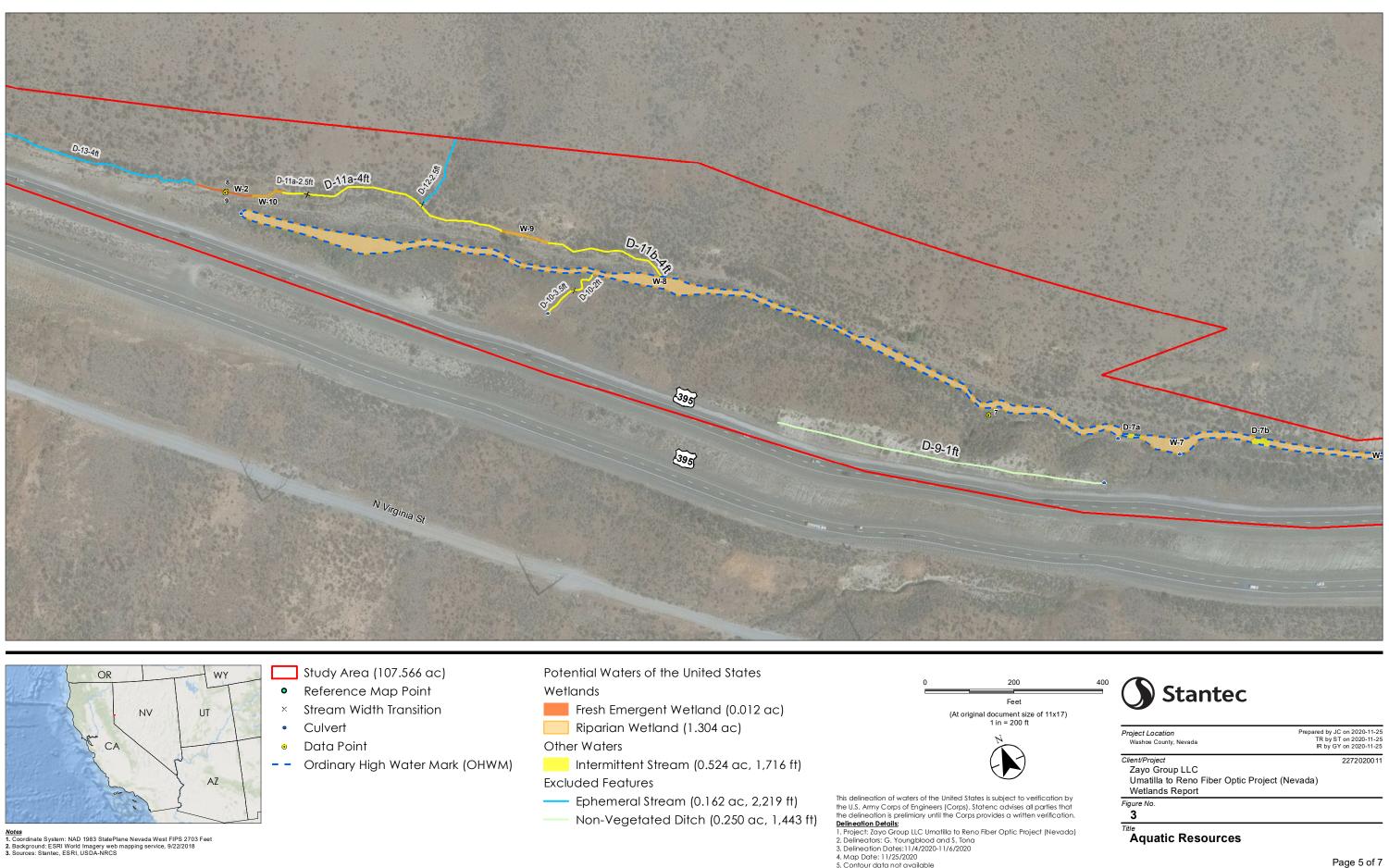


4. Map Date: 11/25/2020 5. Contour data not available

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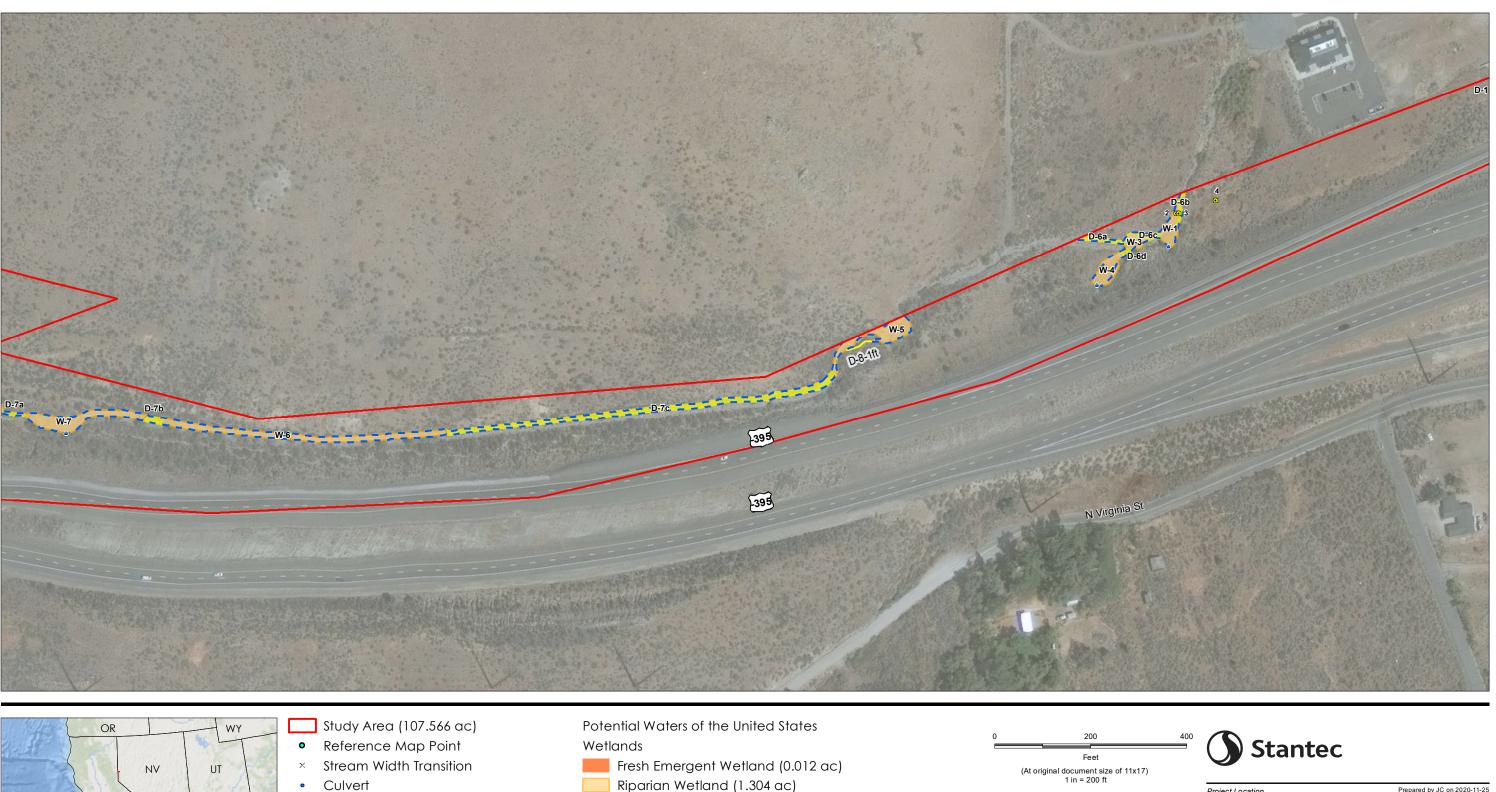






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- Data Point ۲
- - Ordinary High Water Mark (OHWM)

- Other Waters
- Intermittent Stream (0.524 ac, 1,716 ft) Excluded Features
- Ephemeral Stream (0.162 ac, 2,219 ft)
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Project Location Washoe County, Nevada Prepared by JC on 2020-11-25 TR by ST on 2020-11-25 IR by GY on 2020-11-25

Zayo Group LLC Umatilla to Reno Fiber Optic Project (Nevada) Wetlands Report Figure No. 3

Client/Project

Title Aquatic Resources

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- Data Point ۲
- Ordinary High Water Mark (OHWM) - -

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Zayo Group LLC Umatilla to Reno Fiber Optic Project (Nevada) Wetlands Report

Figure No. 3

Client/Project

Title Aquatic Resources

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	Summary	of Potential Wat	ers of the Unit	ed States			
Wetlands							
<u>Label</u>	<u>Түре</u>	Cowardin Type	e cation (x,y) (D		<u>Acres</u>	<u>Lenth (ft)</u>	Width (f
W-1	Riparian Wetland	PSS1	-119.919883		0.044		
W-3	Riparian Wetland	RP2SS	-119.920163	39.62701	0.025		
W-4	Riparian Wetland	RP2SS	-119.920427	39.626911	0.055		
W-5	Riparian Wetland	RP2SS	-119.922197	39.627017	0.097		
W-6	Riparian Wetland	RP2SS	-119.926439	39.627637	0.165		
W-7	Riparian Wetland	RP2SS	-119.927958	39.628159	0.119		
W-8	Riparian Wetland	RP2SS	-119.931615	39.630137	0.784		
W-9	Riparian Wetland	RP2SS	-119.932363	39.630771	0.010		
W-10	Riparian Wetland	RP2SS	-119.934181	39.631569	0.005		
	Subtotal				1.304		
W-2	Fresh Emergent Wetland	RP2EM	-119.9345	39.631683	0.012		
	Subtotal			00.002000	0.012		
	Total Potental Wetlands	1.316					
ther Waters							
D-1	Intermittent Stream	R4SB	-119.917266	39.627117	0.017	36	13
D-4	Intermittent Stream	R4SB	-119.91103	39.625948	0.009	83	4-6
D-6a	Intermittent Stream	R4SB	-119.920402	39.627095	0.022	88	2-15
D-6b	Intermittent Stream	R4SB	-119.919761	39.627102	0.013	81	15
D-6c	Intermittent Stream	R4SB	-119.920054	39.627018	0.014	53	11
D-6d	Intermittent Stream	R4SB	-119.920254	39.626975	0.005	17	12
D-7a	Intermittent Stream	R4SB	-119.92837	39.628311	0.005	40	6
D-7b	Intermittent Stream	R4SB	-119.927426	39.628004	0.012	37	14
D-7c	Intermittent Stream	R4SB	-119.92389	39.627063	0.183	50	9
D-8	Intermittent Stream	R4SB	-119.922341	39.626996	0.001	57	1
D-10	Intermittent Stream	R4SB	-119.932065	39.630392	0.010	150	3.5
D-11a	Intermittent Stream	R4SB	-119.933149	39.631511	0.047	527	4
D-11b	Intermittent Stream	R4SB	-119.931791	39.630505	0.026	287	4
D-20	Intermittent Stream	R4SB	-119.959509	39.645716	0.075	70	9
D-25	Intermittent Stream	R4SB	-119.963043	39.646002	0.085	140	30
	Subtotal				0.524	1,716	
	Total Potental Other Water	s			0.524	1,716	
		-				_,	
	Total Potential Waters of th	e United States			1.840	1.716	

Excluded Features							
<u>Label</u>	Type	Cowardin Type	cation (x,y) (D	Acres	Lenth (ft)	Width (ft)	
D-2	Ephemeral Stream	R4	-119.913147	39.626451	0.004	82	2
D-3a	Ephemeral Stream	R4	-119.950403	39.641487	0.016	198	6
D-3b	Ephemeral Stream	R4	-119.950403	39.641487	0.002	40	2
D-12	Ephemeral Stream	R4	-119.932796	39.63129	0.010	173	2.5
D-13	Ephemeral Stream	R4	-119.935484	39.632673	0.057	693	2-4
D-15	Ephemeral Stream	R4	-119.940596	39.635871	0.027	322	5
D-19	Ephemeral Stream	R4	-119.957804	39.645629	0.041	482	3-6
D-22a	Ephemeral Stream	R4	-119.957181	39.645864	0.002	86	1
D-22b	Ephemeral Stream	R4	-119.957292	39.646023	>0.000	20	1
D-24	Ephemeral Stream	R4	-119.940802	39.635533	0.003	125	1
	Subtotal				0.162	2,219	
D-5	Non-Vegetated Ditch	R4	-119.915592	39.626989	0.010	152	3
D-9	Non-Vegetated Ditch	R4	-119.929864	39.628583	0.017	750	1
D-14	Non-Vegetated Ditch	R4	-119.93771	39.63339	0.025	729	1.5
D-16	Non-Vegetated Ditch	R4	-119.941253	39.635642	0.004	173	1
D-17	Non-Vegetated Ditch	R4	-119.944341	39.638831	0.066	1,418	1-3
D-18	Non-Vegetated Ditch	R4	-119.954048	39.645095	0.072	2,158	1-4
D-21	Non-Vegetated Ditch	R4	-119.957143	39.645986	0.002	53	1.5
D-23	Non-Vegetated Ditch	R4	-119.953401	39.64392	0.054	1,443	2
	Subtotal				0.250	6,875	
	Total Excluded Features				0.412	9,094	



<u>Notes</u> 1. Coordinate System: NAD 1983 StatePlane Nevada West FIPS 2703 Feet 2. Background: ESRI World Imagery web mapping service 3. Sources: Stantec

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Project Location Washoe County, Nevada

Prepared by JC on 2020-11-25 TR by ST on 2020-11-25 IR by GY on 2020-11-25

2272020011

Client/Project Zayo Group LLC Umatilla to Reno Fiber Optic Project (Nevada) Wetlands Report

Figure No. 3

Title **Aquatic Resources**

Table

APPENDIX B SOIL MAP UNITS

Map Unit Name Taxonomy	Map Unit Reference Code	Drainage Class	Depth to Restrictive Layer (cm)	Hydric Soils
Northmore sandy loam, 4 to 8 percent slopes	202	Well drained	>200	No, except swales
Cassiro gravelly sandy loam, 2 to 4 percent slopes	250	Well drained	165	No, except swales
Cassiro gravelly sandy loam, 4 to 8 percent slopes	251	Well drained	165	No, except swales
Cassiro gravelly sandy loam, 8 to 15 percent slopes	252	Well drained	165	No, except swales
Acrelane-Rock outcrop complex, 15 to 50 percent slopes	260	Well drained	50	No
Acrelane very stony sandy loam, 8 to 15 percent slopes s	262	Well drained	50	No
Surgem-Rock outcrop complex, 15 to 30 percent slopes	301	Well drained	50-76	No
Lemm very gravelly coarse sandy loam, 4 to 8 percent slopes	370	Well drained	>200	No
Fettic loam	831	Somewhat poorly drained	>200	No, except flood plains
Reywat extremely stony loam, 15 to 30 percent slopes	861	Well drained	50	No
Xeric Torriorthents-Urban land complex	991	Well drained	>200	No

Note:

cm = centimeter

APPENDIX C DELINEATED POTENTIAL WATERS OF THE U.S.

Waters Nar	ne State Cowardin Co	ode HGM_Code Meas_Type	Amount Units Waters_Type	NWPR Determine Code	Latitude	Longitude	Local Waterway
W-1	CALIFORNIA PSS	RIVERINE Area	0.044 ACRE A4WETFLOOD		-119.91988300	•	Looal_Waterway
W-2	CALIFORNIA RP2EM	RIVERINE Area	0.012 ACRE A4WETFLOOD		-119.93450000		
W-3	CALIFORNIA RP2SS	RIVERINE Area	0.025 ACRE A4WETFLOOD		-119.92016300		
W-4	CALIFORNIA RP2SS	RIVERINE Area	0.055 ACRE A4WETFLOOD		-119.92042700		
W-5	CALIFORNIA RP2SS	RIVERINE Area	0.097 ACRE A4WETFLOOD		-119.92219700		
W-6	CALIFORNIA RP2SS	RIVERINE Area	0.165 ACRE A4WETFLOOD		-119.92643900		
W-7	CALIFORNIA RP2SS	RIVERINE Area	0.119 ACRE A4WETFLOOD		-119.92795800		
W-8	CALIFORNIA RP2SS	RIVERINE Area	0.784 ACRE A4WETFLOOD		-119.93161500		
W-9	CALIFORNIA RP2SS	RIVERINE Area	0.01 ACRE A4WETFLOOD		-119.93236300		
W-10	CALIFORNIA RP2SS	RIVERINE Area	0.005 ACRE A4WETFLOOD		-119.93418100		
D-1	CALIFORNIA R4SB	RIVERINE Area	0.017 ACRE A2TRIBINT		-119.91726600	39.62711700	
D-2	CALIFORNIA R4	RIVERINE Area	0.004 ACRE B3EPHEMERAL	Yes - would have been an (a)(1)-(4) water absent the (b)(2)-(12) exclusion and is therefore also not a (b)(1) exclusion	-119.91314700	39.62645100	
D-3a	CALIFORNIA R4	RIVERINE Area	0.016 ACRE B3EPHEMERAL	Yes - would have been an (a)(1)-(4) water absent the (b)(2)-(12) exclusion and is therefore also not a (b)(1) exclusion	-119.95040300	39.64148700	
D-3b	CALIFORNIA R4	RIVERINE Area	0.002 ACRE B3EPHEMERAL	Yes - would have been an (a)(1)-(4) water absent the (b)(2)-(12) exclusion and is therefore also not a (b)(1) exclusion	-119.95040300	39.64148700	
D-4	CALIFORNIA R4SB	RIVERINE Area	0.009 ACRE A2TRIBINT		-119.91103000	39.62594800	
D-5	CALIFORNIA R4	RIVERINE Area	0.01 ACRE B3EPHEMERAL	Yes - would have been an (a)(1)-(4) water absent the (b)(2)-(12) exclusion and is therefore also not a (b)(1) exclusion	-119.91559200	39.62698900	
D-6a	CALIFORNIA R4SB	RIVERINE Area	0.022 ACRE A2TRIBINT		-119.92040200	39.62709500	
D-6b	CALIFORNIA R4SB	RIVERINE Area	0.013 ACRE A2TRIBINT		-119.91976100	39.62710200	
D-6c	CALIFORNIA R4SB	RIVERINE Area	0.014 ACRE A2TRIBINT		-119.92005400	39.62701800	
D-6d	CALIFORNIA R4SB	RIVERINE Area	0.005 ACRE A2TRIBINT		-119.92025400	39.62697500	
D-7a	CALIFORNIA R4SB	RIVERINE Area	0.005 ACRE A2TRIBINT		-119.92837000	39.62831100	
D-7b	CALIFORNIA R4SB	RIVERINE Area	0.012 ACRE A2TRIBINT		-119.92742600	39.62800400	
D-7c	CALIFORNIA R4SB	RIVERINE Area	0.183 ACRE A2TRIBINT		-119.92389000	39.62706300	
D-8	CALIFORNIA R4SB	RIVERINE Area	0.001 ACRE A2TRIBINT		-119.92234100	39.62699600	
D-9	CALIFORNIA R4	RIVERINE Area		Yes - would have been an (a)(1)-(4) water absent the (b)(2)-(12) exclusion and is therefore also not a (b)(1) exclusion	-119.92986400		
D-10	CALIFORNIA R4SB	RIVERINE Area	0.01 ACRE A2TRIBINT		-119.93206500		
D-11a	CALIFORNIA R4SB	RIVERINE Area	0.047 ACRE A2TRIBINT		-119.93314900		
D-11b	CALIFORNIA R4SB	RIVERINE Area	0.026 ACRE A2TRIBINT		-119.93179100		
D-12	CALIFORNIA R4	RIVERINE Area		Yes - would have been an (a)(1)-(4) water absent the (b)(2)-(12) exclusion and is therefore also not a (b)(1) exclusion	-119.93279600		
D-13	CALIFORNIA R4	RIVERINE Area		Yes - would have been an (a)(1)-(4) water absent the (b)(2)-(12) exclusion and is therefore also not a (b)(1) exclusion	-119.93548400		
D-14	CALIFORNIA R4	RIVERINE Area		Yes - would have been an $(a)(1)$ - (4) water absent the $(b)(2)$ - (12) exclusion and is therefore also not a $(b)(1)$ exclusion	-119.94059600		
D-15	CALIFORNIA R4	RIVERINE Area		Yes - would have been an $(a)(1)$ - (4) water absent the $(b)(2)$ - (12) exclusion and is therefore also not a $(b)(1)$ exclusion	-119.94059600		
D-16	CALIFORNIA R4	RIVERINE Area		Yes - would have been an $(a)(1)$ - (4) water absent the $(b)(2)$ - (12) exclusion and is therefore also not a $(b)(1)$ exclusion	-119.94125300		
D-17	CALIFORNIA R4	RIVERINE Area		Yes - would have been an $(a)(1)$ - (4) water absent the $(b)(2)$ - (12) exclusion and is therefore also not a $(b)(1)$ exclusion	-119.94434100		
D-18	CALIFORNIA R4	RIVERINE Area		Yes - would have been an $(a)(1)$ - (4) water absent the $(b)(2)$ - (12) exclusion and is therefore also not a $(b)(1)$ exclusion	-119.95404800		
D-19	CALIFORNIA R4	RIVERINE Area		Yes - would have been an (a)(1)-(4) water absent the (b)(2)-(12) exclusion and is therefore also not a (b)(1) exclusion	-119.95780400		
D-20	CALIFORNIA R4SB	RIVERINE Area	0.075 ACRE A2TRIBINT		-119.95950900		
D-21	CALIFORNIA R4	RIVERINE Area		Yes - would have been an $(a)(1)$ - (4) water absent the $(b)(2)$ - (12) exclusion and is therefore also not a $(b)(1)$ exclusion	-119.95714300		
D-22a	CALIFORNIA R4	RIVERINE Area		Yes - would have been an $(a)(1)$ - (4) water absent the $(b)(2)$ - (12) exclusion and is therefore also not a $(b)(1)$ exclusion	-119.95718100		
D-22b	CALIFORNIA R4	RIVERINE Area		Yes - would have been an $(a)(1)$ - (4) water absent the $(b)(2)$ - (12) exclusion and is therefore also not a $(b)(1)$ exclusion	-119.95729200		
D-23	CALIFORNIA R4	RIVERINE Area		Yes - would have been an $(a)(1)$ - (4) water absent the $(b)(2)$ - (12) exclusion and is therefore also not a $(b)(1)$ exclusion	-119.95340100		
D-24	CALIFORNIA R4	RIVERINE Area		Yes - would have been an (a)(1)-(4) water absent the (b)(2)-(12) exclusion and is therefore also not a (b)(1) exclusion	-119.94080200		
D-25	CALIFORNIA R4SB	RIVERINE Area	0.085 ACRE A2TRIBINT		-119.96304300	39.04000200	

APPENDIX D WETLAND AND OHWM DETERMINATION DATA FORMS

Sampling Point: 1 Feature ID:	D-1 Date: <u>11/4/2020</u>
Project: Zayo Nevada Reroute	
*	o begin/end file#: <u>See Field Photos</u>
Investigator(s): Gabe Youngblood & Sarah Tona	
Y x / N Do normal circumstances exist on the site?	Location Details:
Y x / N Is the site significantly disturbed?	Along Highway 395
	Projection: Lambert Datum: WGS 84
Detential authors again influences on the shared system.	Coordinates: 39.627153, -119.917225
Potential anthropogenic influences on the channel system:	t culment cutlet and enters stermineter
Channel has been altered with rock slope protection a	it curvert outlet and enters stormwater
system just beyond the study area. Brief site description:	
-	to concrete welled begin that appears to be
Intermittent stream flows from culvert under offramp part of stormwater system.	to concrete walled basin that appears to be
Checklist of resources (if available):	
x Aerial photography Stream gage data	
Dates: Gage number:	
Dates.Gage number.x Topographic mapsPeriod of record:	
	effective discharges
	requency analysis
x Soils maps Most recent shift	
	2-, 5-, 10-, and 25-year events and the
	nt exceeding a 5-year event
Global positioning system (GPS)	
Other studies:	
Hydrogeomorphic Floo	odplain Units
Active Floodplain	, Low Terrace
Low-Flow Channels	OHWM Paleo Channel
Procedure for identifying and characterizing the floodplain u	units to assist in identifying the OHWM:
1. Walk the channel and floodplain within the study area to get an i	mpression of the geomorphology and vegetation
present at the site.	
2. Select a representative cross section across the channel. Draw the	e cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of on	e of the hydrogeomorphic floodplain units.
a) Record the floodplain unit and GPS position.	
 b) Describe the sediment texture (using the Wentworth class siz unit. 	e) and the vegetation characteristics of the floodplain
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	
Mapping on aerial photograph	x GPS
Digitized on computer	Other:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

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

Wentworth Size Classes

Feature ID: D-1	Cross section ID:	Date: 11/4/2020	Time:
Cross section drawing:			
		OHWM	
	OHWM		
	$\langle \vee$		
OHWM			
GPS point: <u>39.627153</u> , -11	19.917225		
Indicators:			
x Change in average se		x Break in bank slope	
x Change in vegetation	•	Other:	
x Change in vegetation	cover	Other:	
Comments:	dominated by morel	minnes more to be ab mith more	l
Vegetative cover increas		gives way to bank with grave	ny sandy loam soll.
vegetative cover micreas	es along the ballks.		
Floodplain unit: x I	low-Flow Channel	Active Floodplain	Low Terrace
_			
GPS point:			
Characteristics of the flood	•		
Average sediment texture:			
Total veg cover: <u>1</u> % Community successional st		<u>1</u> % Herb: <u>0</u> %	
		nerbaceous, shrubs, saplings)	
x Early (herbaceous & s		herbaceous, shrubs, mature trees	;)
			')
Indicators:			
Mudcracks	Soil develo	opment	
Ripples	Surface re	lief	
Drift and/or debris	Other:		
x Presence of bed and ba	nk Other:		
Benches	Other:		
Comments:			
Scoured channel bottom	dominated gravel gen	nerally lacks vegetation and f	iner soil particles.

Floodplain unit: Low-Flow Channel Active Floodplain x Low Terrace
GPS point:
Characteristics of the floodplain unit:
Average sediment texture: Sandy loam soil
Total veg cover: 15 % Tree: 0 % Shrub: 5 % Herb: 10 %
Community successional stage:
NA x Mid (herbaceous, shrubs, saplings)
Early (herbaceous & seedlings) Late (herbaceous, shrubs, mature trees)
Mudcracks x Soil development
Ripples Surface relief
Drift and/or debris Other:
Presence of bed and bank Other:
Benches Other: Comments:
Scoured channel bottom dominated by gravel gives way to bank with gravely sandy loam soil.
Vegetative cover increases along the banks.
vegetative cover increases along the 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 Mid (herbaceous, shrubs, saplings)
NA Mid (herbaceous, shrubs, saplings) Early (herbaceous & seedlings) Late (herbaceous, shrubs, mature trees)
NA Mid (herbaceous, shrubs, saplings) Early (herbaceous & seedlings) Late (herbaceous, shrubs, mature trees) Indicators: Indicators:
NA Mid (herbaceous, shrubs, saplings) Early (herbaceous & seedlings) Late (herbaceous, shrubs, mature trees) Indicators: Soil development
NA Mid (herbaceous, shrubs, saplings) Early (herbaceous & seedlings) Late (herbaceous, shrubs, mature trees) Indicators: Soil development Ripples Surface relief
NA Mid (herbaceous, shrubs, saplings) Early (herbaceous & seedlings) Late (herbaceous, shrubs, mature trees) Indicators: Soil development Mudcracks Surface relief Drift and/or debris Other:
NA Mid (herbaceous, shrubs, saplings) Early (herbaceous & seedlings) Late (herbaceous, shrubs, mature trees) Indicators: Soil development Mudcracks Soil development Ripples Surface relief Drift and/or debris Other: Presence of bed and bank Other:
NA Early (herbaceous & seedlings) Indicators: Mudcracks Ripples Drift and/or debris Presence of bed and bank Benches Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees)
NA Mid (herbaceous, shrubs, saplings) Early (herbaceous & seedlings) Late (herbaceous, shrubs, mature trees) Indicators: Soil development Mudcracks Soil development Ripples Surface relief Drift and/or debris Other: Presence of bed and bank Other:
NA Mid (herbaceous, shrubs, saplings) Early (herbaceous & seedlings) Late (herbaceous, shrubs, mature trees) Indicators: Soil development Mudcracks Soil development Ripples Surface relief Drift and/or debris Other: Presence of bed and bank Other: Benches Other:

Project/Site: 2	ZAYO Nevada reroute	(City/County:	N	Nashoe County	:	Sampling Date	e: 11/0	4/2020
Applicant/Owner:	ZAY		_		State:	Nevada	Sampling Poir	nt:	2
	e Youngblood and Sarah Tona	Ś	Section, Towns				T.20N, R.18E		
Landform (hillslope, terrace, etc):					ex, none):		ve	Slope (%	%): 3
Subregion (LRR): LR					Long:			atum: V	
Soil Map Unit Name:								R4SBJ	
Are climatic / hydrologic condition									
Are Vegetation, Soil								X N	lo
Are Vegetation, Soil					eded, explain any				
SUMMARY OF FINDINGS							-	c.	
Hydrophytic Vegetation Present					, ,		,	-	
Hydric Soil Present?	Yes X No))		ne Sampled	Area				
Wetland Hydrology Present?	Yes X No			nin a Wetlan		Yes X	No		
Remarks:	umanta a rinarian watland within	the hed an	d hank of an im						
Sample point doct	uments a riparian wetland within	the bed and	a dank of an ir	itermittent str	eam.				
VEGETATION - Use scien	itific names of plants.								
					Dominance Te	est workshe	et:		
			D · · ·		Number of Dor	minant Spec	ies		
	2007	Absolute		Indicator	That Are OBL,	FACW, or F	AC:	3	(A)
Tree Stratum (Plot size:		% Cover	Species?	Status					
1					Total Number of	of Dominant			
2					Species Acros	s All Strata:		3	(B)
3									
4					Percent of Dor	ninant Speci	es		
		0	= Total Cove	er	That Are OBL,	FACW, or F	AC:	100.0	(A/B)
Sapling/Shrub Stratum (Plot	size: 15 ft)					,			_ ` ` '
1. Salix geyeriana / Geyer's wil			Yes	OBL	Prevalence In	dex worksh	eet:		
2					Total % C	Cover of:	M	ultiply by:	
0					OBL species	70	x 1 =	70	
4					FACW species	54	x 2 =	108	
5					FAC species	0	x 3 =	0	
		20	= Total Cove	er	FACU species	0	x 4 =	0	
Herb Stratum (Plot size:	<u>5 ft</u>)				UPL species	0	x 5 =	0	
1. Veronica americana / Americ	can brooklime	15	Yes	OBL	Column Totals	: 124	(A)	178	(B)
2. Mentha arvensis / American	wild mint, Field mint	15	Yes	FACW					
3. Rumex salicifolius / Willow le	eaved dock, Willow dock	5	No	FACW	Prevaler	nce Index = E	3/A =	1.44	
4. Polypogon australis / Chilea	in beard grass	2	No	FACW					
5. Epilobium ciliatum / Slender	willow herb	5	No	FACW	Hydrophytic \	legetation I	ndicators:		
6					X Dominand	ce Test is >5	0%		
7.					X Prevalence	e Index ≤3.0)1		
8.			_		Morpholog	gical Adapta	tions ¹ (Provide	e supporting	g
		42	= Total Cove	er	Problema	tic Hydrophy	tic Vegetation	¹ (Explain)	
Woody Vine Stratum (Plot size	ize:)		-						
					¹ Indicators of h	nydric soil an	d wetland hyd	Irology mus	st
2.		·			be present, un	less disturbe	d or problema	atic.	
		0	= Total Cove	er					
% Bare Ground in Herb Stratun	n 58 % Cover	-	ust		Hydrophytic				
					Vegetation				
					Present?	Yes	<u> </u>	נ נ	
Demenden									
Remarks: Hydrophytic veget	tation is dominant.								
<u>.</u>									

S	0	I	L

Depth	Matrix		T(Cub	x Features				
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-3	10YR 3/2	100					See below	See below
vpe: C=Conce	entration, D=Depletion	, RM=Redu	ced Matrix, CS=Cove	ered or Coate	ed Sand Gra	ains.	²Loca	ation: PL=Pore Lining, M=Matrix.
dric Soil Ind	icators: (Applicable	to all LRRs	, unless otherwise	noted.)			Indicators	s for Problematic Hydric Soils ³ :
Histosol (A	.1)		Sandy Red	dox (S5)			1	cm Muck (A9) (LRR C)
Histic Epip	edon (A2)		Stripped N	latrix (S6)			2	cm Muck (A10) (LRR B)
Black Histi	c (A3)		Loamy Mu	cky Mineral	(F1) (except	t MLRA 1)	R	educed Vertic (F18)
Hydrogen	Sulfide (A4)		Loamy Gle	yed Matrix (F2)		R	ed Parent Material (TF2)
Stratified L	ayers (A5) (LRR C)		Depleted M	/latrix (F3)			<u> </u>	ther (Explain in Remarks)
1 cm Muck	(A9) (LRR D)		Redox Da	k Surface (F	6)			
Depleted E	elow Dark Surface (A	11)	Depleted [Dark Surface	(F7)			
Thick Dark	Surface (A12)			pressions (F	8)		³Indica	tors of hydrophytic vegetation and
Sandy Muo	cky Mineral (S1)		Vernal Poo	ols (F9)			wetlan	d hydrology must be present,
Sandy Gle	yed Matrix (S4)						unle	ess disturbed or problematic.
estrictive Lay	ver (if present):							
Туре:								
Depth (inch	ec):						Hydric Soil P	Present? Yes X No
emarks: Te	xture: Cobble, gravel a						d with dominant	hydrophytic vegetation. Imbedded col scription of vegetated sand/gravel bar
emarks: Te an	xture: Cobble, gravel a d gravel restricted dig						d with dominant	hydrophytic vegetation. Imbedded col
emarks: Te an DROLOGY /etland Hydro	xture: Cobble, gravel a d gravel restricted dig	ging to 3 inc	h depth. Problematic				d with dominant	hydrophytic vegetation. Imbedded col
emarks: Te an DROLOGY /etland Hydro rimary Indicato	xture: Cobble, gravel a d gravel restricted dig logy Indicators: prs (minimum of one re	ging to 3 inc	h depth. Problematio	⊧ hydric soil v			d with dominant ream bed fits de	hydrophytic vegetation. Imbedded col scription of vegetated sand/gravel bar dary Indicators (2 or more required)
emarks: Te an DROLOGY /etland Hydro rimary Indicato Surface W	xture: Cobble, gravel a d gravel restricted dig logy Indicators: ors (minimum of one re ater (A1)	ging to 3 inc	h depth. Problemation	(B11)			d with dominant ream bed fits dea <u>Second</u>	hydrophytic vegetation. Imbedded col scription of vegetated sand/gravel bar dary Indicators (2 or more required) /ater Marks (B1) (Riverine)
emarks: Te an DROLOGY /etland Hydro rimary Indicato Surface W. High Wate	xture: Cobble, gravel a d gravel restricted dig blogy Indicators: prs (minimum of one re ater (A1) r Table (A2)	ging to 3 inc	h depth. Problemation	(B11) (B12)	within the ve		d with dominant ream bed fits dea Second W X_S	hydrophytic vegetation. Imbedded col scription of vegetated sand/gravel bar dary Indicators (2 or more required) /ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine)
emarks: Te an DROLOGY /etland Hydro rimary Indicato Surface W High Wate Saturation	xture: Cobble, gravel a d gravel restricted dig logy Indicators: ors (minimum of one re ater (A1) r Table (A2) (A3)	ging to 3 inc	ck all that apply) <u>Ck all that apply) </u> <u>Salt Crust </u> <u>Aquatic Inv</u>	(B11) (B12) vertebrates (Within the ve		d with dominant ream bed fits des Second W X Si D	hydrophytic vegetation. Imbedded col scription of vegetated sand/gravel bar dary Indicators (2 or more required) /ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine)
emarks: Te an DROLOGY /etland Hydro rimary Indicato Surface W High Wate Saturation Water Mark	xture: Cobble, gravel a d gravel restricted dig logy Indicators: ors (minimum of one re ater (A1) r Table (A2) (A3) ks (B1) (Nonriverine)	ging to 3 inc	ck all that apply) <u>Salt Crust</u> <u>Aquatic Inv</u> <u>Hydrogen</u>	(B11) (B12) vertebrates (Sulfide Odor	B13) • (C1)	egetated str	d with dominant ream bed fits des <u>Secon</u> <u>X</u> Si <u>X</u> D <u>X</u> D <u>X</u> D	hydrophytic vegetation. Imbedded col scription of vegetated sand/gravel bar dary Indicators (2 or more required) /ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10)
emarks: Te an DROLOGY /etland Hydro rimary Indicato Surface W High Wate Saturation Water Mari Sediment I	xture: Cobble, gravel a d gravel restricted dig logy Indicators: ors (minimum of one re ater (A1) r Table (A2) (A3) ks (B1) (Nonriverine) Deposits (B2) (Nonriv	ging to 3 inc equired: che erine)	ck all that apply) <u>ck all that apply) </u> <u>Salt Crust</u> <u>Biotic Crust</u> <u>Aquatic Im</u> <u>Hydrogen</u> <u>Oxidized F</u>	(B11) (B12) vertebrates (Sulfide Odor thizospheres	B13) • (C1) s along Livin	egetated str	d with dominant ream bed fits des <u>Second</u> <u>X</u> Se <u>X</u> D <u>X</u> D X D X D	hydrophytic vegetation. Imbedded col scription of vegetated sand/gravel bar dary Indicators (2 or more required) /ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2)
emarks: Te an DROLOGY /etland Hydro rimary Indicate Surface W Gaturation Saturation Water Marl Sediment I Drift Depos	xture: Cobble, gravel a d gravel restricted dig logy Indicators: prs (minimum of one re ater (A1) r Table (A2) (A3) ks (B1) (Nonriverine) Deposits (B2) (Nonriv sits (B3) (Nonriverine)	ging to 3 inc equired: che erine)	ck all that apply) <u>ck all that apply) </u> <u>Salt Crust Biotic Crust Aquatic Inv Hydrogen Oxidized F Presence o</u>	(B11) (B12) vertebrates (Sulfide Odor Rhizospheres of Reduced I	B13) · (C1) s along Livin Iron (C4)	getated str	d with dominant ream bed fits des <u>Secon</u> <u>X</u> Se <u>X</u> D <u>X</u> D <u>X</u> D <u>X</u> D <u>X</u> D <u>X</u> D <u>X</u> D	hydrophytic vegetation. Imbedded col scription of vegetated sand/gravel bar dary Indicators (2 or more required) /ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8)
emarks: Te an DROLOGY /etland Hydro rimary Indicate Surface W High Wate Saturation Water Mari Sediment I Drift Depos Surface So	xture: Cobble, gravel a d gravel restricted dig logy Indicators: prs (minimum of one re ater (A1) r Table (A2) (A3) ks (B1) (Nonriverine) Deposits (B2) (Nonriv sits (B3) (Nonriverine pil Cracks (B6)	ging to 3 inc equired: che erine)	ck all that apply) <u>Salt Crust</u> Biotic Crust Aquatic Im Hydrogen Oxidized F Recent Iro	(B11) (B12) vertebrates (Sulfide Odor chizospheres of Reduced I n Reduction	B13) (C1) s along Livin Iron (C4) in Tilled Soi	getated str	d with dominant ream bed fits der <u>Second</u> <u>X</u> So <u>X</u> D <u>X</u> D <u>X</u> D <u>X</u> D <u>X</u> D <u>X</u> So <u>X</u> D <u>X</u> So <u>X</u> D <u>X</u> So <u>X</u> So <u></u>	hydrophytic vegetation. Imbedded col scription of vegetated sand/gravel bar dary Indicators (2 or more required) dater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C4
emarks: Te an DROLOGY /etland Hydro rimary Indicato 	xture: Cobble, gravel a d gravel restricted dig logy Indicators: ors (minimum of one re ater (A1) r Table (A2) (A3) ks (B1) (Nonriverine) Deposits (B2) (Nonriv sits (B3) (Nonriverine oil Cracks (B6) Visible on Aerial Imag	ging to 3 inc equired: che erine)	ck all that apply)	(B11) (B12) vertebrates (Sulfide Odor thizospheres of Reduced I n Reduction Surface (C7	B13) - (C1) s along Livin Iron (C4) in Tilled Soi r)	getated str	d with dominant ream bed fits der <u>Second</u> <u>X</u> Se <u>X</u> D X D X D X D X Se X Se X Second	hydrophytic vegetation. Imbedded col scription of vegetated sand/gravel bar dary Indicators (2 or more required) dater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C3 hallow Aquitard (D3)
emarks: Te an DROLOGY /etland Hydro rimary Indicato Surface W Saturation Saturation Water Mari Sediment I Sediment I Drift Depos Surface So Inundation	xture: Cobble, gravel a d gravel restricted dig logy Indicators: prs (minimum of one re ater (A1) r Table (A2) (A3) ks (B1) (Nonriverine) Deposits (B2) (Nonriv sits (B3) (Nonriverine pil Cracks (B6)	ging to 3 inc equired: che erine)	ck all that apply)	(B11) (B12) vertebrates (Sulfide Odor chizospheres of Reduced I n Reduction	B13) - (C1) s along Livin Iron (C4) in Tilled Soi r)	getated str	d with dominant ream bed fits der <u>Second</u> <u>X</u> Se <u>X</u> D X D X D X D X Se X Se X Second	hydrophytic vegetation. Imbedded col scription of vegetated sand/gravel bar dary Indicators (2 or more required) dater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C4
emarks: Te an DROLOGY /etland Hydro rimary Indicate Saurface W High Wate Saturation Water Mari Sediment I Drift Depos Surface So Inundation Surface So	xture: Cobble, gravel a d gravel restricted dig logy Indicators: <u>ors (minimum of one re</u> ater (A1) r Table (A2) (A3) ks (B1) (Nonriverine) Deposits (B2) (Nonriv sits (B3) (Nonriverine) bil Cracks (B6) Visible on Aerial Imag bil Cracks (B6)	ging to 3 inc equired: che erine)	ck all that apply)	(B11) (B12) vertebrates (Sulfide Odor thizospheres of Reduced I n Reduction Surface (C7	B13) - (C1) s along Livin Iron (C4) in Tilled Soi r)	getated str	d with dominant ream bed fits der <u>Second</u> <u>X</u> Se <u>X</u> D X D X D X D X Se X Se X Second	hydrophytic vegetation. Imbedded col scription of vegetated sand/gravel bar dary Indicators (2 or more required) dater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C3 hallow Aquitard (D3)
emarks: Te an DROLOGY /etland Hydro rimary Indicato Surface W High Wate Saturation Water Mari Sediment I Sediment I Drift Depos Surface So Inundation	xture: Cobble, gravel a d gravel restricted dig blogy Indicators: brs (minimum of one re ater (A1) r Table (A2) (A3) ks (B1) (Nonriverine) Deposits (B2) (Nonriv sits (B3) (Nonriverine) bil Cracks (B6) Visible on Aerial Imag bil Cracks (B6)	equired: che erine) ery (B7)	ck all that apply)	(B11) (B11) vertebrates (Sulfide Odor Rhizospheres of Reduced I n Reduction Sulface (C7 olain in Rema	B13) - (C1) s along Livin Iron (C4) in Tilled Soi r)	getated str	d with dominant ream bed fits der <u>Second</u> <u>X</u> Se <u>X</u> D X D X D X D X Se X Se X Second	hydrophytic vegetation. Imbedded col scription of vegetated sand/gravel bar dary Indicators (2 or more required) dater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C3 hallow Aquitard (D3)
emarks: Te an DROLOGY /etland Hydro rimary Indicato Called Vater Mari Saturation Water Mari Sediment I Sediment I Drift Depos Surface So Inundation Surface So iteld Observat urface Water F	xture: Cobble, gravel a d gravel restricted dig blogy Indicators: brs (minimum of one re ater (A1) r Table (A2) (A3) ks (B1) (Nonriverine) Deposits (B2) (Nonriv sits (B3) (Nonriverine) bil Cracks (B6) Visible on Aerial Imag bil Cracks (B6) Visible on Aerial Imag bil Cracks (B6)	equired: che erine) a) gery (B7) s N	ck all that apply) Salt Crust Biotic Crust Aquatic Im Aquatic Im	(B11) (B11) (B12) vertebrates (Sulfide Odor Rhizospheres of Reduced I n Reduction Sulface (C7 olain in Rema ches):	B13) - (C1) s along Livin Iron (C4) in Tilled Soi r)	getated str	d with dominant ream bed fits der <u>Second</u> <u>X</u> Se <u>X</u> D X D X D X D X Se X Se X Second	hydrophytic vegetation. Imbedded col scription of vegetated sand/gravel bar dary Indicators (2 or more required) dater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C3 hallow Aquitard (D3)
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Project/Site: Applicant/Owner:			City/County:	N			Sampling Date: Sampling Point	<u>11/04/2020</u> 3	
	Gabe Youngblood and Sarah Tona		Section, Town	ship, Range:		Sec. 2,	T.20N, R.18E		
	race, etc): Drainage						ave	Slope (%): 3	
	LRR D Interior Deserts				Long: -				
Soil Map Unit Name:	Lemm very gravelly coarse sa	ndy loam, 4				classificatio		R4SBJ	
	c conditions on the site typical for this time								
	_, Soil, or Hydrologys							X No	
	, Soil , or Hydrology r								
	NDINGS - Attach site map show								
	-			iooutiono,		portant		<u> </u>	_
Hydrophytic Vegetatio									
Hydric Soil Present?	Yes N			the Sampled					
Wetland Hydrology P	Present? Yes X N	0	wit	hin a Wetlan	d? ``	res	NoX		
Remarks:									_
	ents upland conditions adjacent to a riparia	an wetland \	N-1 document	ted by sample	e point 2				
	. , .			, i					
VEGETATION - Us	se scientific names of plants.								
					Dominance Te	est workshe	eet:		
					Number of Don				
		Absolute	Dominant	Indicator	That Are OBL,	•		2 (A)	
Tree Stratum (Plot	size: 30ft)	% Cover	Species?	Status	That Are OBL,	FACVV, OF F	AC	(A)	
1.					Total Number o	of Dominant			
2.								(D)	
2					Species Across	s All Strata:		4 (B)	
4.									
		0	= Total Cov	er	Percent of Don	•			
Sapling/Shrub Stratu	m (Plot size:15 ft)				That Are OBL,	FACW, or F	AC:	50.0 (A/B)	
1. Rosa woodsii / Wo		20	Yes	FACU	Prevalence In	dax warkek	ant:		
								tiply by:	
2						over of: 4	x 1 =	tiply by:	
4					OBL species				
5.					FACW species				
J		20	- Total Cav		FAC species	2			
Harb Stratum (Diat		20	= Total Cov	ei	FACU species	-	x 4 =		
	size: <u>5 ft</u>)	20	Vaa		UPL species				
	/ Willow leaved dock, Willow dock	20	Yes	FACW	Column Totals:	140	(A)	426 (B)	
	s / Yellow sweetclover	15	Yes	FACU					
3. <u>Conium maculatur</u>		10	Yes	FACW	Prevalen	ce Index = I	B/A =	3.04	
	na / American brooklime	2	No	OBL	Hydrophytic V	logotation	ndicators		
	Nodding plumeless thistle, Musk thistle	2	<u>No</u>	FACU		e Test is >5			
	aris / Milkweed, Narrow-leaf milkweed	1	No	FAC		e Index ≤3.0			
								o un nortin a	
8							tions ¹ (Provide		
		50	= Total Cov	er		ис нуагорпу	vtic Vegetation ¹	(Explain)	
	(Plot size:)				4 1 1 1 1				
1						-	nd wetland hydro		
2					be present, unl	ess disturbe	ed or problemat	IC.	
		0	= Total Cov	er	Hydrophytic				-
% Bare Ground in He	erb Stratum 50 % Cover	of Biotic Cr	rust						
					Vegetation Present?	Vaa	Na	V	
					Present?	res	No		
Remarks:									
	hytic vegetation is not dominant.								

S	0	IL	
J	J		-

Depth	Matrix		Reuo.	x Features				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	10YR 3/1	100					loamy sand	See below
		<u> </u>			·			
		<u> </u>			. <u> </u>			
					·			
					·			
		·			·			
		<u> </u>			·			
Type: C=Con	centration, D=Depletion	n, RM=Reduce	d Matrix, CS=Cove	ered or Coate	ed Sand Gra	ains.	²Loca	ation: PL=Pore Lining, M=Matrix.
lydric Soil Ir	ndicators: (Applicable	to all LRRs, u	Inless otherwise r	noted.)			Indicators	s for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Rec	dox (S5)			1	cm Muck (A9) (LRR C)
Histic Ep	ipedon (A2)		Stripped M	latrix (S6)			2	cm Muck (A10) (LRR B)
Black His	()			cky Mineral (t MLRA 1)		educed Vertic (F18)
	n Sulfide (A4)			eyed Matrix (I	F2)			ed Parent Material (TF2)
	Layers (A5) (LRR C)		Depleted N		~		O	ther (Explain in Remarks)
	ck (A9) (LRR D)			k Surface (F	,			
	l Below Dark Surface (A rk Surface (A12)	ATT)		Dark Surface Dressions (F8			3Indiaa	tors of hydrophytic vegetation and
	ucky Mineral (S1)		Vernal Poo		5)			d hydrology must be present,
	leyed Matrix (S4)			JIS (1 5)				ess disturbed or problematic.
_								
	ayer (if present):							
Type:								
Depth (inc	ches):						Hydric Soil P	resent? Yes <u>No X</u>
DROLOG	Y							
Vetland Hyd	Y rology Indicators: ators (minimum of one r	required: check	c all that apply)				Second	dary Indicators (2 or more required)
Vetland Hyd	rology Indicators:	required: check	all that apply)	(B11)				dary Indicators (2 or more required) /ater Marks (B1) (Riverine)
Vetland Hydr rimary Indica Surface \ High Wat	rology Indicators: ators (minimum of one r Water (A1) ter Table (A2)	required: check		. ,			W	
Vetland Hydr Primary Indica Surface \ High Wat Saturatio	rology Indicators: ators (minimum of one r Water (A1) ter Table (A2) n (A3)	·	Salt Crust Biotic Crus Aquatic Inv	st (B12) vertebrates (I			W X_Se	ater Marks (B1) (Riverine)
Vetland Hyd Primary Indica Surface \ High Wat Saturatio Water Ma	rology Indicators: ators (minimum of one r Water (A1) ter Table (A2) in (A3) arks (B1) (Nonriverine))	Salt Crust Biotic Crus Aquatic Inv Hydrogen	st (B12) vertebrates (I Sulfide Odor	(C1)		W X Se X Di X Di	ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10)
Vetland Hydi Primary Indica Surface \ High Wat Saturatio Water Ma Sedimen	rology Indicators: ators (minimum of one r Water (A1) ter Table (A2) an (A3) arks (B1) (Nonriverine) t Deposits (B2) (Nonri) verine)	Salt Crust Biotic Crus Aquatic Inv Hydrogen Oxidized R	st (B12) vertebrates (I Sulfide Odor Rhizospheres	· (C1) along Livin	ng Roots (C	3) W X Se X Di X Di	ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2)
Vetland Hydi Primary Indica Surface \ High Wat Saturatio Water Ma Sedimen Drift Dep	rology Indicators: ators (minimum of one r Water (A1) ter Table (A2) on (A3) arks (B1) (Nonriverine) t Deposits (B2) (Nonriv osits (B3) (Nonriverin) verine)	Salt Crust Biotic Crus Aquatic Inv Hydrogen Oxidized R Presence o	t (B12) vertebrates (I Sulfide Odor Rhizospheres of Reduced I	[.] (C1) along Livin ron (C4)		3)C	ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8)
Vetland Hydi Primary Indica Surface V High Wat Saturatio Water Ma Sedimen Drift Dep Surface S	rology Indicators: ators (minimum of one r Water (A1) ter Table (A2) on (A3) arks (B1) (Nonriverine) t Deposits (B2) (Nonriv osits (B3) (Nonriverin Soil Cracks (B6)) verine) e)	Salt Crust Biotic Crus Aquatic Inv Hydrogen Oxidized R Presence o Recent Iro	t (B12) vertebrates (I Sulfide Odor Rhizospheres of Reduced I n Reduction	· (C1) along Livin ron (C4) in Tilled So		3)	Tater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9)
Vetland Hydi Irimary Indica Surface V High Wat Saturatio Water Ma Sedimen Drift Dep Surface S Inundatic	rology Indicators: ators (minimum of one r Water (A1) ter Table (A2) on (A3) arks (B1) (Nonriverine) t Deposits (B2) (Nonriv osits (B3) (Nonriverin Soil Cracks (B6) on Visible on Aerial Ima) verine) e)	Salt Crust Biotic Crus Aquatic Inv Hydrogen Oxidized R Presence o Recent Iro Thin Muck	t (B12) vertebrates (I Sulfide Odor Rhizospheres of Reduced I n Reduction Surface (C7	(C1) along Livin ron (C4) in Tilled Soi)		(3) (3) (3) (3) (4) (5) (5) (5) (5) (5) (5) (5) (5	Tater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) nallow Aquitard (D3)
Vetland Hydi Primary Indica Surface V High Wat Saturatio Water Ma Sedimen Drift Dep Surface S Inundatic Surface S	rology Indicators: ators (minimum of one r Water (A1) ter Table (A2) on (A3) arks (B1) (Nonriverine) t Deposits (B2) (Nonriv osits (B3) (Nonriverin Soil Cracks (B6) on Visible on Aerial Ima Soil Cracks (B6)) verine) e)	Salt Crust Biotic Crus Aquatic Inv Hydrogen Oxidized R Presence o Recent Iro Thin Muck	t (B12) vertebrates (I Sulfide Odor Rhizospheres of Reduced I n Reduction	(C1) along Livin ron (C4) in Tilled Soi)		(3) (3) (3) (3) (4) (5) (5) (5) (5) (5) (5) (5) (5	Tater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9)
Vetland Hydi Primary Indica Surface V High Wat Saturatio Water Ma Sedimen Drift Dep Surface S Inundatic Surface S	rology Indicators: ators (minimum of one r Water (A1) ter Table (A2) on (A3) arks (B1) (Nonriverine) t Deposits (B2) (Nonriverine) soils (B3) (Nonriverine) Soil Cracks (B6) on Visible on Aerial Ima Soil Cracks (B6) ations:) verine) e) gery (B7)	Salt Crust Biotic Crus Aquatic Inv Hydrogen Oxidized R Presence o Recent Iro Thin Muck Other (Exp	t (B12) vertebrates (I Sulfide Odor Rhizospheres of Reduced I n Reduction Surface (C7 Ilain in Rema	(C1) along Livin ron (C4) in Tilled Soi)		(3) (3) (3) (3) (4) (5) (5) (5) (5) (5) (5) (5) (5	Tater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) nallow Aquitard (D3)
Vetland Hydr Primary Indica Surface V High Wat Saturatio Water Ma Sedimen Drift Dep Surface S Inundatio Surface S Field Observation	rology Indicators: ators (minimum of one r Water (A1) ter Table (A2) on (A3) arks (B1) (Nonriverine) t Deposits (B2) (Nonriv osits (B3) (Nonriverin Soil Cracks (B6) on Visible on Aerial Ima Soil Cracks (B6) ations: r Present? Ye) verine) e) gery (B7) es No	Salt Crust Biotic Crus Aquatic Inv Hydrogen Oxidized R Presence o Recent Iro Thin Muck Other (Exp	t (B12) vertebrates (I Sulfide Odor Rhizospheres of Reduced I n Reduction Surface (C7 olain in Rema ches):	(C1) along Livin ron (C4) in Tilled Soi)		(3) (3) (3) (3) (4) (5) (5) (5) (5) (5) (5) (5) (5	Tater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) hallow Aquitard (D3)
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Vetland Hydi Primary Indica Surface V High Wat Saturatio Water Ma Sedimen Drift Dep Surface S Inundatio Surface S Surface Water Vater Table P Saturation Pre- ncludes capi Describe Reco	rology Indicators: ators (minimum of one r Water (A1) ter Table (A2) on (A3) arks (B1) (Nonriverine) t Deposits (B2) (Nonriv osits (B3) (Nonriverin Soil Cracks (B6) on Visible on Aerial Ima Soil Cracks (B6) ations: r Present? Ye present? Ye esent? Ye llary fringe) orded Data (stream gau) verine) e) gery (B7) es No es No uge, monitoring	Salt Crust Biotic Crus Aquatic Inv Hydrogen Oxidized R Presence o Recent Iro Thin Muck Other (Exp X Depth (in X Depth (in X Depth (in	t (B12) vertebrates (I Sulfide Odor Rhizospheres of Reduced I n Reduction Surface (C7 vlain in Rema ches): ches): ches):	· (C1) s along Livin ron (C4) in Tilled So ') arks)	ils (C6) Wetla	(3) (3) (4) (3) (4) (4) (4) (4) (4) (4) (4) (4	Tater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) hallow Aquitard (D3) AC-Neutral Test (D5)

Project/Site:			City/County		Washoe County				
Applicant/Owner:	ZAYO				State: N	Nevada	Sampling Po	int:	4
Investigator(s):	Gabe Youngblood and Sarah Tona		Section, To	wnship, Range	:	Sec. 3	, T.20N, R.18	E	
Landform (hillslope, terr	race, etc): Hillslope						/ex	Slope ((%): 2
Subregion (LRR):	LRR D Interior Deserts	Lat:	39.62	27072	Long: -	119.91949	7 [Datum:	WGS 84
Soil Map Unit Name:	Lemm very gravelly coarse san	dy loam, 4	4 to 8 perce	nt slopes (370)	NWI	classificatio	n:	None	
	c conditions on the site typical for this time of								
Are Vegetation	_, Soil, or Hydrologysi	gnificantly	disturbed?	Are	"Normal Circumstan	nces" prese	nt? Yes	Х	No
Are Vegetation	_, Soil, or Hydrologyna	aturally pro	oblematic?	(lf n	eeded, explain any a	answers in	Remarks.)		
SUMMARY OF FIN	NDINGS - Attach site map showing the second stress of the second stress	ng sam	pling poi	nt locations	s, transects, im	portant f	features, e	tc.	
Hydrophytic Vegetati	ion Present? Yes X No								
Hydric Soil Present?				Is the Sampled	d Area				
Wetland Hydrology P				within a Wetla	nd?	Yes	No	Х	
		-	-				_		
Remarks:				4 - 4 ¹	a dia atawa af buahia a	- 11			1
hydrolog	e point documents a suspect area that suppo	orts nyaro	pnytic veget	tation but lack I	indicators of hydric s	soli and suff	icient indicato	ors of wetlar	na
inyuloio;	95								
VEGETATION - US	se scientific names of plants.								
					Dominance Te	oct workeb	oot:		
					Number of Dor				
		Absolute	Dominan	t Indicator	That Are OBL,	•		1	(A)
Tree Stratum (Plot	t size:30ft)	% Cover	Species?	Status	That Are OBL,	FACVV, ULI	AC.	I	(A)
1.					- Total Number o	of Dominant	ł		
2.					- Species Across			1	(B)
3.						o / li Oliulu.			(D)
4.					- Percent of Don	ninant Spec	ries		
		0	= Total C	over	That Are OBL,	•		100.0	(A/B)
Sapling/Shrub Stratu	ım (Plot size: <u>15ft</u>)				matrito obe,	171011, 011		100.0	(/ (/ (/))
1					Prevalence In	dex works	heet:		
2					Total % C	over of:	N	Aultiply by:	
3					OBL species	0	x 1 =	0	
4					FACW species	125	5 x 2 =	250	
5					FAC species	0	x 3 =	0	
		0	= Total C	over	FACU species	0	x 4 =	0	
Herb Stratum (Plot					UPL species	10		50	
-	sp. littoralis / Mountain rush	85	Yes		Column Totals:	135	5 (A)	300	(B)
2. Conium maculatur		20	No	FACW	_				
	/ Downy chess, Cheat grass, Downy chess	10	No	UPL	Prevalen	ce Index =	B/A =	2.22	
4						logatation	Indicatoro		
					Hydrophytic V	-			
					X Dominanc				
7				<u> </u>			o ations ¹ (Provie	de sunnortii	na
8		445					ytic Vegetatic		-
Maadu Vina Stratum		115	_ = Total C	over		lic Hydroph	ylic vegetalie)
	(Plot size:)				¹ Indicators of h	wdric soil a	nd wetland hy	drology m	iet
1					be present, unl	•			101
2			= Total C		- be present, un			latic.	
0/ Dara Craund in Us	arth Stratum 0 % Causa			over 0	Hydrophytic				
	erb Stratum 0 % Cover of		rust	0	Vegetation				
					Present?	Yes	s <u>X</u> N	10	_
Remarks:	butic vocatation is dominant								
пушорі	hytic vegetation is dominant.								

S	0	IL	
J	J		-

	Matrix		Redo	x Features				
(inches)	Color (moist) %	С	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-14	10YR 4/2 100	00					Clay loam	
					. <u> </u>			
ype: C=Cond	centration, D=Depletion, RM=	Reduced N	Atrix, CS=Cov	ered or Coate	ed Sand Gr	ains.	² Location:	PL=Pore Lining, M=Matrix.
ydric Soil In	dicators: (Applicable to all I	LRRs, unle	ess otherwise	noted.)			Indicators for	Problematic Hydric Soils ³ :
Histosol (A1)		Sandy Re	dox (S5)			1 cm M	luck (A9) (LRR C)
Histic Epi	pedon (A2)		Stripped M	latrix (S6)			2 cm M	luck (A10) (LRR B)
Black His	tic (A3)		Loamy Mu	icky Mineral	(F1) (excep	t MLRA 1)	Reduce	ed Vertic (F18)
Hydrogen	n Sulfide (A4)		Loamy Gle	eyed Matrix (F2)		Red Pa	arent Material (TF2)
Stratified	Layers (A5) (LRR C)		Depleted I	Matrix (F3)			Other (Explain in Remarks)
1 cm Muc	ck (A9) (LRR D)		Redox Da	rk Surface (F	6)			
Depleted	Below Dark Surface (A11)		Depleted I	Dark Surface	(F7)			
Thick Dar	k Surface (A12)		Redox De	pressions (F8	8)		³ Indicators of	of hydrophytic vegetation and
Sandy Mu	ucky Mineral (S1)		Vernal Poo	ols (F9)			wetland hyd	rology must be present,
Sandy Gl	eyed Matrix (S4)						unless di	isturbed or problematic.
estrictive La	ayer (if present):							
Туре:								
Depth (inc	hes):						Hydric Soil Prese	nt? Yes <u>No X</u>
DROLOG								
	Ŷ							
-	ology Indicators:						Octore describer	
rimary Indica	ology Indicators: tors (minimum of one required	d: check all		(D44)				ndicators (2 or more required)
rimary Indica Surface V	ology Indicators: tors (minimum of one required Vater (A1)	d: check all	Salt Crust				Water	Marks (B1) (Riverine)
rimary Indica Surface V High Wate	rology Indicators: tors (minimum of one required Vater (A1) er Table (A2)	d: check all	Salt Crust Biotic Crus	st (B12)	P12)		Water I Sedime	Marks (B1) (Riverine) ent Deposits (B2) (Riverine)
rimary Indica Surface V High Wate Saturation	rology Indicators: tors (minimum of one required Vater (A1) er Table (A2) n (A3)	d: check all	Salt Crust Biotic Crus Aquatic In	st (B12) vertebrates (Water I Sedime Drift De	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine)
rimary Indica Surface V High Wate Saturation Water Ma	rology Indicators: tors (minimum of one required Vater (A1) er Table (A2) n (A3) urks (B1) (Nonriverine)		Salt Crust Biotic Crus Aquatic In Hydrogen	st (B12) vertebrates (Sulfide Odor	(C1)	og Poots (C	Water I Sedime Drift De Drainag	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10)
rimary Indica Surface V High Wate Saturation Water Ma Sediment	rology Indicators: tors (minimum of one required Vater (A1) er Table (A2) n (A3) urks (B1) (Nonriverine) : Deposits (B2) (Nonriverine)		Salt Crust Biotic Crus Aquatic In Hydrogen Oxidized F	st (B12) vertebrates (Sulfide Odor Rhizospheres	· (C1) s along Livir	ng Roots (C	Water I Sedime Drift De Drainag C3) Dry-Se	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2)
rimary Indica Surface V High Wate Saturation Water Ma Sediment Drift Depo	rology Indicators: tors (minimum of one required Vater (A1) er Table (A2) n (A3) urks (B1) (Nonriverine) : Deposits (B2) (Nonriverine) posits (B3) (Nonriverine)		Salt Crust Biotic Crus Aquatic In Hydrogen Oxidized F Presence	st (B12) vertebrates (Sulfide Odor Rhizospheres of Reduced I	[·] (C1) along Livir ron (C4)		C3) Water I Water I Sedime Drift De Drainag Cayfis Crayfis	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) h Burrows (C8)
rimary Indica Surface V High Wate Saturation Water Ma Sediment Drift Depo Surface S	torology Indicators: tors (minimum of one required Vater (A1) er Table (A2) n (A3) urks (B1) (Nonriverine) : Deposits (B2) (Nonriverine) osits (B3) (Nonriverine) Soil Cracks (B6)		Salt Crust Biotic Crus Aquatic In Hydrogen Oxidized F Presence Recent Iro	st (B12) vertebrates (Sulfide Odor Rhizospheres of Reduced I n Reduction	(C1) along Livir ron (C4) in Tilled So		C3) Carylin Ca	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9)
rimary Indica Surface V High Wate Saturation Water Ma Sediment Drift Depo Surface S Inundation	rology Indicators: tors (minimum of one required Vater (A1) er Table (A2) n (A3) urks (B1) (Nonriverine) : Deposits (B2) (Nonriverine) osits (B3) (Nonriverine) Soil Cracks (B6) n Visible on Aerial Imagery (B		Salt Crust Biotic Crus Aquatic In Hydrogen Oxidized F Presence Recent Iro Thin Muck	st (B12) vertebrates (Sulfide Odor Rhizospheres of Reduced I n Reduction Surface (C7	(C1) along Livir ron (C4) in Tilled So		C3) Crayfis C3) Crayfis C3) Crayfis C3) Crayfis C3 C7ayfis C7ayfis Saturat Shallov	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) v Aquitard (D3)
rimary Indica Surface V High Wate Saturation Water Ma Sediment Drift Depo Surface S Inundation Surface S	tology Indicators: tors (minimum of one required Vater (A1) er Table (A2) n (A3) urks (B1) (Nonriverine) : Deposits (B2) (Nonriverine) osits (B3) (Nonriverine) Soil Cracks (B6) n Visible on Aerial Imagery (B Soil Cracks (B6)		Salt Crust Biotic Crus Aquatic In Hydrogen Oxidized F Presence Recent Iro Thin Muck	st (B12) vertebrates (Sulfide Odor Rhizospheres of Reduced I n Reduction	(C1) along Livir ron (C4) in Tilled So		C3) Crayfis C3) Crayfis C3) Crayfis C3) Crayfis C3 C7ayfis C7ayfis Saturat Shallov	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9)
rimary Indica Surface V High Wate Saturation Water Ma Sediment Drift Depo Surface S Inundation Surface S	rology Indicators: tors (minimum of one required Vater (A1) er Table (A2) n (A3) arks (B1) (Nonriverine) E Deposits (B2) (Nonriverine) Soil Cracks (B6) n Visible on Aerial Imagery (B Soil Cracks (B6) ations:	7)	Salt Crust Biotic Crus Aquatic In Hydrogen Oxidized F Presence Recent Iro Thin Muck Other (Exp	st (B12) vertebrates (Sulfide Odor Rhizospheres of Reduced I in Reduction Surface (C7 olain in Rema	(C1) along Livir ron (C4) in Tilled So		C3) Crayfis C3) Crayfis C3) Crayfis C3) Crayfis C3 C7ayfis C7ayfis Saturat Shallov	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) v Aquitard (D3)
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Project/Site:	ZAYO Nev	ada reroute		City/County:	N	Washoe County		Sampling [Date:	11/04/2020
Applicant/Owner:			ZAYO	, ,			Nevada	Sampling F		
Investigator(s):		od and Sarah Ton	a	Section Tow	nshin Range			1, T.20N, R.1		
Landform (hillslope, terr						ex, none):				pe (%): 2
Subregion (LRR):							110 01 422		Deturni	
Soil Map Unit Name:									INO	ne
Are climatic / hydrologic										
Are Vegetation									es X	No
Are Vegetation										
SUMMARY OF FIN	DINGS - Attacl	n site map she	owing sam	oling poin	t locations,	, transects, in	nportant	features,	etc.	
Hydrophytic Vegetatio	on Present?	Yes X	No							
Hydric Soil Present?		Yes			the Sampled	Area				
Wetland Hydrology Pr	resent?	Yes	No X	wi	ithin a Wetlan	d?	Yes	No	Х	
				-						
Remarks:										
Sample	point documents a s	suspect area that s	supports hydro	ohytic vegeta	tion but lack in	dicators of hydric	soil and we	tland hydrole	ogy.	
		nee of plants								
VEGETATION - Us	se scientific har	nes or plants.	1							
						Dominance T	fest worksh	neet:		
			A b a a b c b	Deminent	la dia atau	Number of Do	minant Spe	cies		
T 01 1 (D1 1			Absolute	Dominant		That Are OBL	, FACW, or	FAC:	2	(A)
Tree Stratum (Plot	size: <u>30π</u>)	% Cover	Species?	Status					
1						Total Number	of Dominar	nt		
						Species Acros	ss All Strata	1:	2	(B)
3								_		
4						Percent of Do	minant Spe	cies		
			0	= Total Cov	ver	That Are OBL	, FACW, or	FAC:	100.0) (A/B)
Sapling/Shrub Stratur		15ft)								
1						Prevalence li	ndex works	sheet:		
2.						Total %	Cover of:		Multiply	by:
3.						OBL species	15	5 x 1	= 1	15
4.						FACW specie	s 5	x 2	= 1	10
5.						FAC species	-		-	90
			0	= Total Cov	ver	FACU species	s 0			0
Herb Stratum (Plot	size: 5 ft)				UPL species	0			0
1. Typha latifolia / Bro	oadleaf cattail, Broa	d-leaved cattail	15	Yes	OBL	Column Totals				15 (B)
2. Lepidium latifolium	/ Perennial pepperv	weed	15	Yes	FAC			()		()
3. Juncus arcticus ss	p. littoralis / Mountai	in rush	5	No	FACW	Prevale	nce Index =	= B/A =	2.3	
4.										
5.						Hydrophytic	Vegetation	Indicators:	:	
6.						X Dominan				
-						X Prevalen	ce Index ≤3	.01		
8.						Morpholo	ogical Adapt	tations ¹ (Pro	vide supp	orting
			35	= Total Cov	ver		-	nytic Vegetat		-
Woody Vine Stratum	(Plot size:)					, ,	, ,		,
						¹ Indicators of	hydric soil a	and wetland	hydrology	/ must
1 2.						be present, ur	•			
Z			0	= Total Cov					Sinato.	
% Bare Ground in He	when Christian C			_		Hydrophytic				
% bare Ground in He		6 <u>5</u> %Co	over of Biotic C)	Vegetation				
						Present?	Ye	s X	No	
Remarks:										
Hydroph	nytic vegetation is do	minant.								

S	Ο	I	L
Э	υ	I	L

(inches) 0-5	O I () ()								
0-5	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture	Remark	(S
	10YR 4/3	95	7.5YR 4/4	5	C	PL	Clay loam		
5-12	10YR 3/2	100					Sandy loam		
<u>-</u>									
<u> </u>									
<u> </u>									
		·							
		·							
ype: C=Conce	entration, D=Depletion,	RM=Reduced	Matrix, CS=Cove	ered or Coate	ed Sand Gra	ains.	² Location:	PL=Pore Lining, M	I=Matrix.
ydric Soil Ind	licators: (Applicable to	o all LRRs, ur	less otherwise	noted.)			Indicators for	Problematic Hydr	ic Soils³:
Histosol (A	(1)		Sandy Red	dox (S5)			1 cm N	/luck (A9) (LRR C)	
Histic Epip	edon (A2)		Stripped N	latrix (S6)			2 cm N	luck (A10) (LRR B)
Black Histi	c (A3)		Loamy Mu	cky Mineral ((F1) (except	MLRA 1)	Reduc	ed Vertic (F18)	
Hydrogen 3	Sulfide (A4)		Loamy Gle	eyed Matrix (I	F2)		Red Pa	arent Material (TF2)
Stratified L	ayers (A5) (LRR C)		Depleted N				Other	(Explain in Remark	s)
_	(A9) (LRR D)			rk Surface (F	6)				
-	Below Dark Surface (A1	1)		Dark Surface	,				
	Surface (A12)		·	pressions (F8	. ,		³ Indicators	of hydrophytic vege	tation and
_	cky Mineral (S1)		Vernal Poo		-			frology must be pre	
_ `	yed Matrix (S4)			. /				listurbed or problem	
- estrictive Lav	ver (if present):								
Туре:									
Depth (inch	es):		_				Hydric Soil Prese	nt? Yes	No
DROLOGY	,								
etland Hydro	logy Indicators:						Secondary	Indiantoro (2 or mo	
etland Hydro	logy Indicators:	quired: check a		(011)				Indicators (2 or mo	· · ·
etland Hydro rimary Indicato Surface Wa	ology Indicators: ors (minimum of one rec ater (A1)	quired: check a	Salt Crust				Water	Marks (B1) (Riveri	ne)
etland Hydro imary Indicato Surface Wa High Water	logy Indicators: ors (minimum of one rec ater (A1) r Table (A2)	quired: check a	Salt Crust	st (B12)			Water Sedim	Marks (B1) (Riverin ent Deposits (B2) (ne) Riverine)
retland Hydro rimary Indicato Surface Wa High Water Saturation	logy Indicators: ors (minimum of one rec ater (A1) r Table (A2) (A3)	quired: check a	Salt Crust Biotic Crus Aquatic Inv	st (B12) vertebrates (I	-		Water Sedim Drift D	Marks (B1) (Riverin ent Deposits (B2) (eposits (B3) (River	ne) Riverine)
Vetland Hydro rimary Indicato Surface Wa High Waten Saturation Water Marl	ology Indicators: ors (minimum of one red ater (A1) r Table (A2) (A3) ks (B1) (Nonriverine)	<u>.</u>	Salt Crust Biotic Crus Aquatic In Hydrogen	st (B12) vertebrates (I Sulfide Odor	(C1)	- Deete (/	Water Sedim Drift D Draina	Marks (B1) (Riveri ent Deposits (B2) (eposits (B3) (Rive ge Patterns (B10)	ne) Riverine) rine)
Vetland Hydro rimary Indicato Surface Wa High Water Saturation Water Marl Sediment I	ology Indicators: ors (minimum of one rec ater (A1) r Table (A2) (A3) ks (B1) (Nonriverine) Deposits (B2) (Nonrive	rine)	Salt Crust Biotic Crus Aquatic Inv Hydrogen Oxidized F	st (B12) vertebrates (I Sulfide Odor Rhizospheres	(C1) along Livin	g Roots (C	C3) Water Water Sedim Drift D Draina Dry-Se	Marks (B1) (Riveri n ent Deposits (B2) (eposits (B3) (Rive ge Patterns (B10) eason Water Table (ne) Riverine) rine)
Vetland Hydro rimary Indicato Surface Wa High Water Saturation Water Mari Sediment I Drift Deposition	ology Indicators: ors (minimum of one rec ater (A1) r Table (A2) (A3) ks (B1) (Nonriverine) Deposits (B2) (Nonrive sits (B3) (Nonriverine)	rine)	Salt Crust Biotic Crus Aquatic Inv Hydrogen Oxidized F Presence	st (B12) vertebrates (I Sulfide Odor Rhizospheres of Reduced I	(C1) along Livin ron (C4)	•	C3) Crayfis	Marks (B1) (Riveri n ent Deposits (B2) (eposits (B3) (Rive r ge Patterns (B10) eason Water Table (sh Burrows (C8)	ne) Riverine) rine) (C2)
Jetland Hydro rimary Indicate Surface Wa High Water Saturation Water Marl Sediment I Drift Depos Surface So	ology Indicators: ors (minimum of one rec ater (A1) r Table (A2) (A3) ks (B1) (Nonriverine) Deposits (B2) (Nonrive sits (B3) (Nonriverine) bil Cracks (B6)	rine)	Salt Crust Biotic Crus Aquatic Inv Hydrogen Oxidized F Presence o Recent Iro	st (B12) vertebrates (I Sulfide Odor Rhizospheres of Reduced I n Reduction	(C1) along Livin ron (C4) in Tilled Soi	•	C3) Cast Cast Cast Cast Cast Cast Cast Cast	Marks (B1) (Riverin ent Deposits (B2) (eposits (B3) (Rive ge Patterns (B10) eason Water Table (sh Burrows (C8) tion Visible on Aeria	ne) Riverine) rine) (C2)
Image Image Surface High Saturation Water Water Sediment Drift Depose Inundation	ology Indicators: ors (minimum of one rec ater (A1) r Table (A2) (A3) ks (B1) (Nonriverine) Deposits (B2) (Nonrive sits (B3) (Nonriverine) bil Cracks (B6) Visible on Aerial Image	rine)	Salt Crust Biotic Crus Aquatic Inv Hydrogen Oxidized F Presence Recent Iro Thin Muck	st (B12) vertebrates (I Sulfide Odor Rhizospheres of Reduced I n Reduction Surface (C7	(C1) along Livin ron (C4) in Tilled Soi)	•	C3) Crayfis C3) Crayfis C3) Crayfis C3) Crayfis C3 C3 C7ayfis C3 C7ayfis C3 Shallo	Marks (B1) (Riverin ent Deposits (B2) (eposits (B3) (River ge Patterns (B10) eason Water Table (sh Burrows (C8) tion Visible on Aeria w Aquitard (D3)	ne) Riverine) rine) (C2)
Just constraint Indicate Surface Wa High Water Saturation Water Marl Sediment I Drift Depos Surface Sc Inundation	ology Indicators: ors (minimum of one rec ater (A1) r Table (A2) (A3) ks (B1) (Nonriverine) Deposits (B2) (Nonrive sits (B3) (Nonriverine) bil Cracks (B6)	rine)	Salt Crust Biotic Crus Aquatic Inv Hydrogen Oxidized F Presence Recent Iro Thin Muck	st (B12) vertebrates (I Sulfide Odor Rhizospheres of Reduced I n Reduction	(C1) along Livin ron (C4) in Tilled Soi)	•	C3) Crayfis C3) Crayfis C3) Crayfis C3) Crayfis C3 C3 C7ayfis C3 C7ayfis C3 Shallo	Marks (B1) (Riverin ent Deposits (B2) (eposits (B3) (Rive ge Patterns (B10) eason Water Table (sh Burrows (C8) tion Visible on Aeria	ne) Riverine) rine) (C2)
Vetland Hydro rimary Indicato Surface Wa High Water Saturation Water Marl Sediment I Drift Depos Surface So Inundation Surface So	ology Indicators: ors (minimum of one rec ater (A1) r Table (A2) (A3) ks (B1) (Nonriverine) Deposits (B2) (Nonrive sits (B3) (Nonriverine) bil Cracks (B6) Visible on Aerial Image bil Cracks (B6)	rine)	Salt Crust Biotic Crus Aquatic Inv Hydrogen Oxidized F Presence Recent Iro Thin Muck	st (B12) vertebrates (I Sulfide Odor Rhizospheres of Reduced I n Reduction Surface (C7	(C1) along Livin ron (C4) in Tilled Soi)	•	C3) Crayfis C3) Crayfis C3) Crayfis C3) Crayfis C3 C3 C7ayfis C3 C7ayfis C3 Shallo	Marks (B1) (Riverin ent Deposits (B2) (eposits (B3) (River ge Patterns (B10) eason Water Table (sh Burrows (C8) tion Visible on Aeria w Aquitard (D3)	ne) Riverine) rine) (C2)
rimary Indicato Surface Wa High Water Saturation Water Marl Sediment I Drift Depos Surface So Inundation	ology Indicators: ors (minimum of one rec ater (A1) r Table (A2) (A3) ks (B1) (Nonriverine) Deposits (B2) (Nonrive sits (B3) (Nonriverine) bil Cracks (B6) Visible on Aerial Image bil Cracks (B6) ions:	rine) ery (B7)	Salt Crust Biotic Crus Aquatic Inv Hydrogen Oxidized F Presence Recent Iro Thin Muck Other (Exp X Depth (in	st (B12) vertebrates (I Sulfide Odor Rhizospheres of Reduced I n Reduction Surface (C7 olain in Rema	(C1) along Livin ron (C4) in Tilled Soi)	•	C3) Crayfis C3) Crayfis C3) Crayfis C3) Crayfis C3 C3 C7ayfis C3 C7ayfis C3 Shallo	Marks (B1) (Riverin ent Deposits (B2) (eposits (B3) (River ge Patterns (B10) eason Water Table (sh Burrows (C8) tion Visible on Aeria w Aquitard (D3)	ne) Riverine) rine) (C2)
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etland Hydro imary Indicate Surface Wa High Water Saturation Water Marl Sediment I Drift Depose Surface Sc Inundation Surface Sc eld Observat urface Water F aturation Pres	blogy Indicators: brs (minimum of one red ater (A1) r Table (A2) (A3) ks (B1) (Nonriverine) Deposits (B2) (Nonrive sits (B3) (Nonriverine) bil Cracks (B6) Visible on Aerial Image bil Cracks (B6) Fresent? Yes sent? Yes	rine) ery (B7) No No	Salt Crust Biotic Crus Aquatic Inv Hydrogen Oxidized F Presence o Recent Iro Thin Muck Other (Exp X Depth (in X Depth (in	st (B12) vertebrates (I Sulfide Odor Rhizospheres of Reduced I n Reduction Surface (C7 olain in Rema aches):	(C1) along Livin ron (C4) in Tilled Soi)	ils (C6)	C3) Water Sedim Drift D Draina Dry-Se Crayfis Satura Shallo X FAC-N	Marks (B1) (Riveri ent Deposits (B2) (eposits (B3) (River ge Patterns (B10) eason Water Table (sh Burrows (C8) tion Visible on Aeria w Aquitard (D3) leutral Test (D5)	ne) Riverine) rine) (C2) al Imagery (C
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Vetland Hydro rimary Indicato Surface Wa High Water Saturation Water Marl Sediment I Sediment I Drift Depos Surface So Inundation Surface So ield Observat varface Water F /ater Table Pre aturation Pres ncludes capilla escribe Recor	blogy Indicators: ors (minimum of one rec ater (A1) r Table (A2) (A3) ks (B1) (Nonriverine) Deposits (B2) (Nonrive sits (B3) (Nonriverine) bil Cracks (B6) Visible on Aerial Image bil Cracks (B6) Fresent? Yes essent? Yes ent? Yes ary fringe) ded Data (stream gauge	rine) ery (B7) No No e, monitoring v	Salt Crust Biotic Crus Aquatic Inv Hydrogen Oxidized F Presence Recent Iro Thin Muck Other (Exp X Depth (in X Depth (in X Depth (in	st (B12) vertebrates (I Sulfide Odor Rhizospheres of Reduced I n Reduction Surface (C7 olain in Rema aches):	(C1) along Livin ron (C4) in Tilled Soi) arks)	Wetla	Water Sedim Drift D Draina C3) Dry-Se Crayfis Satura Shallo X FAC-N	Marks (B1) (Riveri ent Deposits (B2) (eposits (B3) (River ge Patterns (B10) eason Water Table (sh Burrows (C8) tion Visible on Aeria w Aquitard (D3) leutral Test (D5)	ne) Riverine) rine) (C2) al Imagery (C
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Sampling Point: 6 Feature ID:	D-2 Date: 11/4/2020
Project: Zayo Nevada Reroute	
Location: Washoe County Photo	o begin/end file#: See Field Photos
Investigator(s): Gabe Youngblood & Sarah Tona	
Y x / N Do normal circumstances exist on the site?	Location Details:
Y / N x Is the site significantly disturbed?	Along Highway 395
	Projection: Lambert Datum: NAD83
	Coordinates: 39.626475, -119.913179
Potential anthropogenic influences on the channel system:	
The stream may just drain the highway as no stream	is visible on the opposite side of the highway
on aerial imagery.	
Brief site description:	
Small ephemeral stream flows from culvert under hig	ghway off ramp out of the study area.
Scoured channel with no vegetation rooted in channel	l
Checklist of resources (if available):	
x Aerial photography Stream gage data	
Dates: Gage number:	
x Topographic maps Period of record:	
Geologic maps History of recent	effective discharges
	requency analysis
x Soils maps Most recent shift	t-adjusted rating
Rainfall/precipitation maps Gage heights for	2-, 5-, 10-, and 25-year events and the
	nt exceeding a 5-year event
x Global positioning system (GPS)	
Other studies:	
Hydrogeomorphic Flor	odplain Units
Active Floodplain	Low Terrace
	and the second s
Low-Flow Channels	OHWM Paleo Channel
Procedure for identifying and characterizing the floodplain	
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 th	
3. Determine a point on the cross section that is characteristic of or	ne of the hydrogeomorphic floodplain units.
a) Record the floodplain unit and GPS position.	
 b) Describe the sediment texture (using the Wentworth class size unit. 	ze) and the vegetation characteristics of the floodplain
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 OHWN	
Mapping on aerial photograph	x GPS
Digitized on computer	Other:

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

Wentworth Size Classes

Feature ID: D-2	Cross section ID:	Date: 11/4/2020 Time:
Cross section drawing:		
	SHW M	OHWM
<u>OHWM</u>	10 019170	
GPS point: <u>39.626475, -11</u> Indicators:	19.913179	<u> </u>
x Change in average se	diment texture	Break in bank slope
x Change in vegetation		
x Change in vegetation		Other:Other:
Comments:		
	dominated by gravel ar	id sand gives way to bank with sandy loam soil.
	• •	erhang channel and herbaceous vegetation is
present along the banks		
Floodplain unit: x I	low-Flow Channel	x Active Floodplain Low Terrace
GPS point:		
Characteristics of the flood	•	
Average sediment texture:	Gravel and sand	
Average sediment texture: Total veg cover: 0 %	Gravel and sand Tree: 0 % Shrub: 0	% Herb: <u>0 %</u>
Average sediment texture: Total veg cover: 0 % Community successional st	Gravel and sand Tree: 0 % Shrub: 0 tage:	
Average sediment texture: Total veg cover: 0 % Community successional st	Gravel and sand Tree: 0 % Shrub: 0 tage:	baceous, shrubs, saplings)
Average sediment texture: Total veg cover: 0 % Community successional st	Gravel and sand Tree: 0 % Shrub: 0 tage:	
Average sediment texture: Total veg cover: 0 % Community successional st NA x Early (herbaceous & s	Gravel and sand Tree: 0 % Shrub: 0 tage:	baceous, shrubs, saplings)
Average sediment texture: Total veg cover: 0 % Community successional st NA x Early (herbaceous & s	Gravel and sand Tree: 0 % Shrub: 0 tage: Seedlings) Late (her	baceous, shrubs, saplings) baceous, shrubs, mature trees)
Average sediment texture: Total veg cover: 0 % Community successional st NA x Early (herbaceous & s Indicators: Mudcracks	Gravel and sand Tree: 0 % Shrub: 0 tage: Seedlings) Late (her Soil developr	baceous, shrubs, saplings) baceous, shrubs, mature trees) nent
Average sediment texture: Total veg cover: 0 % Community successional st NA x Early (herbaceous & s Indicators: Mudcracks Ripples	Gravel and sand Tree: 0 % Shrub: 0 tage: Seedlings) Late (her Soil developr Surface relief	baceous, shrubs, saplings) baceous, shrubs, mature trees) nent
Average sediment texture: Total veg cover: 0 % Community successional st NA x Early (herbaceous & s Indicators: Mudcracks Ripples x Drift and/or debris	Gravel and sand Tree: 0 % Shrub: 0 tage: Seedlings) Late (her Soil developr Surface relief Other:	baceous, shrubs, saplings) baceous, shrubs, mature trees) nent
Average sediment texture: Total veg cover: 0 % Community successional st NA x Early (herbaceous & s Indicators: Mudcracks Ripples x Drift and/or debris x Presence of bed and ba	Gravel and sand Tree: 0 % Shrub: 0 tage: Mid (her seedlings) Late (her Soil develop Surface relief Other: Other:	baceous, shrubs, saplings) baceous, shrubs, mature trees) nent
Average sediment texture: Total veg cover: 0 % Community successional st NA x Early (herbaceous & s Indicators: Mudcracks Ripples x Drift and/or debris	Gravel and sand Tree: 0 % Shrub: 0 tage: Seedlings) Late (her Soil developr Surface relief Other:	baceous, shrubs, saplings) baceous, shrubs, mature trees) nent
Average sediment texture: Total veg cover: 0 % Community successional st NA x Early (herbaceous & s Indicators: Mudcracks Ripples x Drift and/or debris x Presence of bed and ba Benches Comments:	Gravel and sand Tree: 0 % Shrub: 0 tage: Mid (her seedlings) Late (her Soil developr Surface relief Other: Other: Other: Other:	baceous, shrubs, saplings) baceous, shrubs, mature trees) nent

Feature ID: D-2	Cross section ID:	Date: 11/4/202	0 Time:
Floodplain unit:	Low-Flow Channel	Active Floodplain	x Low Terrace
GPS point:			
Characteristics of the fl	oodplain unit:		
Average sediment text	ure: loamy sand		
Total veg cover: 65	% Tree: 0 % Shrub:	60 % Herb: 5 %	
Community succession	al stage:		
NA	x Mid (he	rbaceous, shrubs, saplings)	
Early (herbaceous	s & seedlings) Late (he	rbaceous, shrubs, mature t	rees)
Indicators:			
Mudcracks	x Soil develop		
Ripples	Surface relie	et	
Drift and/or debris	Other:		
Presence of bed and			
Benches	Other:		
Comments:	tom dominated by gravel a	nd and gives were to be	nly with candy loam soil
Vegetative cover alor		nu sanu gives way to ba	nk with sandy loam son.
vegetative cover alor	ig the ballks.		
Floodplain unit:	Low-Flow Channel	Active Floodplain	Low Terrace
GPS point:			
Characteristics of the fl	•		
Average sediment text			
Total veg cover:		% Herb:%	
Community succession			
NA		rbaceous, shrubs, saplings)	
Early (herbaceous	s & seedlings)	rbaceous, shrubs, mature t	rees)
Indicators:			
Mudcracks	Soil develop	mont	
Ripples	Surface relie		
Drift and/or debris	Other:	.1	
Presence of bed and			
Benches	Other:		
Comments:			

Project/Site:	ZAYO Nevada reroute		City/County:	,	Washoe County	San	pling Date:	11/05	5/2020
Applicant/Owner:					State: Ne				7
Investigator(s):		-	Section, Townsl				0N, R.18E		
Landform (hillslope, terra	•				ex, none):			Slope (%	6): 1
Subregion (LRR):					Long: -11			m: W	-
	Cassiro gravelly sand							None	
	conditions on the site typical for this time				(If no, explain in	-			
	_, Soil, or Hydrologys				Normal Circumstance	s" present?	Yes	X N	0
	, Soil, or Hydrologyr				eded, explain any ans	swers in Rem	arks.)		
SUMMARY OF FIN	DINGS - Attach site map show	ing samp	oling point l	ocations	, transects, impo	ortant feat	ures, etc.		
Hydrophytic Vegetatio	n Present? Yes X	0							
Hydric Soil Present?		0 X		e Sampled	Area				
Wetland Hydrology Pr				in a Wetlan	id? Yes	3	No X		
Remarks:	a sint de sum ante a supra at avag that supr	anta budrar		n hutlaak in	diastars of hudris sail	and aufficience	t indicators o	functions	J
hydrology	point documents a suspect area that supp	ons nyarop	onytic vegetation	n dul iack in	Idicators of hydric soli	and sunicien	it indicators o	rwelland	1
	j.								
VEGETATION - Use	e scientific names of plants.								
	•				Dominance Test	worksheet:			
					Number of Domin				
		Absolute	Dominant	Indicator	That Are OBL, FA	•		3	(A)
Tree Stratum (Plot s	size: <u>30ft</u>)	% Cover	Species?	Status	,	- ,		-	_ ()
1					Total Number of [Dominant			
2					Species Across A	II Strata:		3	(B)
									_
4					Percent of Domin	ant Species			
One line (Ohmuh, Ohmuh,		0	= Total Cover	•	That Are OBL, FA	CW, or FAC:	10	0.0	(A/B)
	n (Plot size: <u>15ft</u>)	50	Vee						
1. <u>Salix exigua / Narro</u>		<u>50</u>	_ <u>Yes</u> No	FACW UPL	Prevalence Inde				
2. Artemisia tridentata 3.	a / Common sagebrush	10		UPL	Total % Cov			ply by:	
J					OBL species	0	_ x1=	0	
5.					FACW species FAC species	200	_ x 2 = x 3 =	400 0	
· · · · · · · · · · · · · · · · · · ·		60	= Total Cover		FAC species	0	_ x3= x4=	÷	
Herb Stratum (Plot s	size: 5 ft)				UPL species	10	_ ^ + = x 5 =		
1. Conium maculatum	/	30	Yes	FACW	Column Totals:	210	(A)	450	(B)
2. Juncus arcticus ssp	<i>b. littoralis</i> / Mountain rush	40	Yes	FACW		210	_ (()	100	(D)
3.					Prevalence	Index = B/A	= 2	.14	
4.									
5.					Hydrophytic Veg	etation Indio	cators:		
6.					X Dominance				
-					X Prevalence I				
8					Morphologic				9
		70	= Total Cover	-	Problematic	Hydrophytic \	Vegetation ¹ (E	Explain)	
Woody Vine Stratum	(Plot size:)								
					¹ Indicators of hyd		-		t
2					be present, unles	s disturbed o	r problematic		
		0			Hydrophytic				
% Bare Ground in Her	b Stratum <u>30</u> % Cover	of Biotic Ci	rust 0		Vegetation				
					Present?	Yes	X No		
Remarks:	utio versitation is dominant								
Hydrophy	ytic vegetation is dominant.								

S	0	I	L

(inches)			Redo						
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		narks
0-10	10YR 4/2	100					Loam	Rock at 10 inches	restricted digging
	<u> </u>	·			·			<u> </u>	
					·	. <u> </u>			
		·			·				
					·	<u> </u>			
					·	·			
		·			·				
ype: C=Conce	entration, D=Depletior	n, RM=Redu	ced Matrix, CS=Cov	ered or Coat	ed Sand Gr	ains.	²Lo	cation: PL=Pore Lining	g, M=Matrix.
ydric Soil Ind	licators: (Applicable	to all LRRs	, unless otherwise	noted.)			Indicato	rs for Problematic H	ydric Soils ³ :
Histosol (A	,		Sandy Re					1 cm Muck (A9) (LRR	
Histic Epip			Stripped N					2 cm Muck (A10) (LR	R B)
Black Histi				cky Mineral		t MLRA 1)		Reduced Vertic (F18)	
	Sulfide (A4)			eyed Matrix (F2)			Red Parent Material (
	_ayers (A5) (LRR C) k (A9) (LRR D)		Depleted I		(A)			Other (Explain in Rem	iarks)
	K (A9) (LRR D) Below Dark Surface (A	(11)		'k Surface (F Dark Surface	-				
	selow Dark Surface (A surface (A12)	,		pressions (F			³Indic	ators of hydrophytic v	regetation and
	cky Mineral (S1)		Vernal Poo		0)			nd hydrology must be	-
	eyed Matrix (S4)							less disturbed or prob	
estrictive Lav	yer (if present):								
Туре:	yei (ii present).								
Depth (inch	nes):						Hydric Soil	Present? Yes	No
emarks:	o indicators of hydric s	oil were obs	served.						
emarks: Nc	o indicators of hydric s	oil were obs	served.						
emarks: No DROLOGY Vetland Hydro	o indicators of hydric s								
temarks: No DROLOGY Vetland Hydro rimary Indicato	o indicators of hydric s		eck all that apply)				<u>Seco</u>	- ndary Indicators (2 or	1 /
emarks: No DROLOGY /etland Hydro rimary Indicato Surface Wa	o indicators of hydric s f blogy Indicators: ors (minimum of one r /ater (A1)		eck all that apply) Salt Crust				<u>Seco</u>	ndary Indicators (2 or Water Marks (B1) (Riv	verine)
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Remarks: No DROLOGY Vetland Hydro Primary Indicato Surface Wa High Watel Saturation Water Marl	o indicators of hydric s ology Indicators: ors (minimum of one r /ater (A1) or Table (A2) (A3) rks (B1) (Nonriverine)	equired: che	eck all that apply) Salt Crust Biotic Crust Aquatic In Hydrogen	st (B12) vertebrates (Sulfide Odor	(C1)	na Roots (C	<u>Seco</u>	ndary Indicators (2 or Water Marks (B1) (Riv Sediment Deposits (B3) Drift Deposits (B3) (R Drainage Patterns (B1)	verine) 2) (Riverine) Riverine) 10)
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Remarks: No ZDROLOGY No Zerland Hydro No Primary Indicato Surface Water	o indicators of hydric s ology Indicators: ors (minimum of one r fater (A1) er Table (A2) (A3) rks (B1) (Nonriverine) Deposits (B2) (Nonriv sits (B3) (Nonriverine) oil Cracks (B6) o Visible on Aerial Imag oil Cracks (B6)	equired: che verine) e) gery (B7)	eck all that apply) Salt Crust Biotic Crus Aquatic In Hydrogen Oxidized F Presence Recent Iro Thin Muck	t (B12) vertebrates (Sulfide Odor Rhizospheres of Reduced I n Reduction Surface (C7 olain in Rema	(C1) along Livir Iron (C4) in Tilled So)		<u>Seco</u> 3)	ndary Indicators (2 or Water Marks (B1) (Riv Sediment Deposits (B3) Drift Deposits (B3) (R Drainage Patterns (B1 Dry-Season Water Tat Crayfish Burrows (C8) Saturation Visible on A Shallow Aquitard (D3)	verine) 2) (Riverine) (liverine) 10) ble (C2) Aerial Imagery (CS
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emarks: No DROLOGY /etland Hydro rimary Indicato Surface Wa High Water Saturation Water Marl Sediment I Sediment I Drift Depos Surface So Inundation Surface So ield Observat urface Water F /ater Table Pres	o indicators of hydric s o indicators of hydric s ology Indicators: ors (minimum of one r /ater (A1) er Table (A2) (A3) (Ks (B1) (Nonriverine) Deposits (B2) (Nonriv sits (B3) (Nonriverine) oil Cracks (B6) tions: Present? Ye sent? Ye	equired: che verine) a) gery (B7) s N s N	eck all that apply) Salt Crust Biotic Crus Aquatic In Hydrogen Oxidized F Presence Recent Iro Thin Muck Other (Exp lo X Depth (ir Depth (ir	t (B12) vertebrates (Sulfide Odor Rhizospheres of Reduced I n Reduction Surface (C7 plain in Rema ches): ches):	(C1) s along Livir ron (C4) in Tilled So) arks)	ils (C6)	3) <u>Seco</u> 3) <u></u> <u>X</u>	ndary Indicators (2 or Water Marks (B1) (Riv Sediment Deposits (B3) (R Drainage Patterns (B1 Dry-Season Water Tat Crayfish Burrows (C8) Saturation Visible on A Shallow Aquitard (D3) FAC-Neutral Test (D5)	verine) 2) (Riverine) (IO) ble (C2) Aerial Imagery (CS
emarks: DROLOGY Vetland Hydro rimary Indicato Surface Wa High Water Saturation Water Marl Sediment I Drift Depos Surface So Inundation Surface So ield Observat urface Water F Vater Table Pre aturation Pres ncludes capilla	o indicators of hydric s o indicators of hydric s ology Indicators: ors (minimum of one r /ater (A1) er Table (A2) (A3) (Ks (B1) (Nonriverine) Deposits (B2) (Nonriv sits (B3) (Nonriverine) oil Cracks (B6) tions: Present? Ye sent? Ye	equired: che verine) e) gery (B7) s N s N s N	eck all that apply)Salt CrustAquatic InHydrogenOxidized FPresenceRecent IroThin MuckOther (Exp loXDepth (ir loXDepth (ir loXDepth (ir	t (B12) vertebrates (Sulfide Odor Rhizospheres of Reduced I n Reduction Surface (C7 olain in Rema ches): ches): ches):	· (C1) s along Livir ron (C4) in Tilled So ') arks)	ils (C6) Wetlar	3) <u>Seco</u> 	ndary Indicators (2 or Water Marks (B1) (Riv Sediment Deposits (B3) (R Drainage Patterns (B1 Dry-Season Water Tat Crayfish Burrows (C8) Saturation Visible on A Shallow Aquitard (D3) FAC-Neutral Test (D5)	verine) 2) (Riverine) (IO) ble (C2) Aerial Imagery (CS
emarks: No DROLOGY /etland Hydro rimary Indicato Surface Wa High Water Saturation Water Marl Sediment I Drift Depos Surface So Inundation Surface So ield Observat urface Water F /ater Table Pre- aturation Pres- ncludes capilla escribe Recor	o indicators of hydric s ology Indicators: ors (minimum of one r /ater (A1) er Table (A2) (A3) rks (B1) (Nonriverine) Deposits (B2) (Nonriverine) oil Cracks (B6) o Visible on Aerial Imagoil Cracks (B6) tions: Present? Ye esent? Ye esent? Ye esent? Ye esent? Ye	equired: che verine) e) gery (B7) s N s N s N	eck all that apply)Salt CrustAquatic InHydrogenOxidized FPresenceRecent IroThin MuckOther (Exp loXDepth (ir loXDepth (ir loXDepth (ir	t (B12) vertebrates (Sulfide Odor Rhizospheres of Reduced I n Reduction Surface (C7 olain in Rema ches): ches): ches):	· (C1) s along Livir ron (C4) in Tilled So ') arks)	ils (C6) Wetlar	3) <u>Seco</u> 	ndary Indicators (2 or Water Marks (B1) (Riv Sediment Deposits (B3) (R Drainage Patterns (B1 Dry-Season Water Tat Crayfish Burrows (C8) Saturation Visible on A Shallow Aquitard (D3) FAC-Neutral Test (D5)	verine) 2) (Riverine) (IO) ble (C2) Aerial Imagery (CS
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Project/Site:	ZAYO Nevada reroute	(City/County:	١	Washoe County		Sampli	ng Date:	11/0	5/2020
Applicant/Owner:	ZAY	0			State:	Nevada	Samplii	ng Point:		8
Investigator(s):	Gabe Youngblood and Sarah Tona errace, etc): Drainage	(Section, Towns	hip, Range:		Sec.	2, T.20N,	R.18E		
Landform (hillslope, te	errace, etc): Drainage		Local relief (co	ncave. conve	ex. none):	Con	cave		Slope (%	6): 1
Subregion (LRR):	LRR D Interior Deserts	Lat:	39.6316	68	Long:	-119,9344	79	Datu	m: W	/GS 84
	Cassiro gravelly sandy loa								None	
	jic conditions on the site typical for this time									
	, Soil, or Hydrologysi							Yes	X N	lo
	, Soil, or Hydrologyn				eded, explain any				<u>~</u> 1	
	INDINGS - Attach site map showi									
		- ·			, 11 41150015, 111	ιροπαπι	leature	es, elc.		
Hydrophytic Vegeta)			_					
Hydric Soil Present				ne Sampled						
Wetland Hydrology	Present? Yes X No		with	nin a Wetlan	d?	Yes X	No	00		
Domorkov										
Remarks: Sample	e point documents a fresh emergent wetland	d within a s	treambed							
Cumpi			liounibou.							
VEGETATION - U	Ise scientific names of plants.									
					Dominance T	est works	heet:			
					Number of Do					
		Absolute	Dominant	Indicator	That Are OBL	•			1	(A)
Tree Stratum (Plo	ot size: 30ft)	% Cover	Species?	Status	That Are Obl	, 1 ACVV, 01	TAC.		<u> </u>	_ (~)
1.					Total Number	of Domina	nt			
0					Species Acros				1	(D)
					Species Acros	SS All Strate	1.		1	(B)
					Demonstraf De	min ant Cn				
			= Total Cove	r	Percent of Do	•				
Sapling/Shrub Strat	tum (Plot size: 15ft)		_		That Are OBL	, FACVV, or	FAC:	10	0.0	(A/B)
1.					Prevalence Ir	ndex work	sheet.			
•						Cover of:		Multi	ply by:	
					OBL species			x 1 =		
					FACW species	-		x 1 = x 2 =		
								x 3 =		
0		0	= Total Cove		FAC species					
Herb Stratum (Plo	ot size: 5 ft)			•	FACU species UPL species			x 4 = x 5 =	0	
`	Broadleaf cattail, Broad-leaved cattail	60	Yes	OBL						(D)
	alis / Chilean beard grass	15		FACW	Column Totals	s. <u>Ic</u>	60	(A)	200	(B)
	acea / Reed canarygrass, Reed canary gras			FACW					05	
4.	acea / Reeu canalygiass, Reeu canaly gias		INU	FACW	Prevale	nce Index =	= B/A =	1	.25	
-					Hydrophytic	Vegetation	n Indicate	ors.		
5					X Dominan			515.		
_					X Prevalen					
						gical Adap		Provide s	upporting	-
8						atic Hydrop				9
		80	= Total Cove	ſ		alle Hydrop	nyuc veg		_vhiaiii)	
	n (Plot size:)				Indicators of	hudria agilu	and wate	nd hydrol	00000000	.+
					¹ Indicators of	•		-		il i
2					be present, ur	liess distur	bed of pr	oplematic	•	
		0	_ = Total Cove	r	Hydrophytic					
% Bare Ground in H	Herb Stratum 20 % Cover	of Biotic Cr	rust 0		Vegetation					
					Present?	Ye	-s X	No		
							<u> </u>			
Remarks:										
Hydrop	phytic vegetation is dominant.									

S	0	IL	
J	J		-

(inches) 0-6	Matrix		Redux	Features				
0-6	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
	10YR 5/1	97	10YR 3/6	3	C	PL	Sandy loam	
					·	;		
					·			
				·				
ype: C=Conc	centration, D=Depletion,	RM=Reduced	Matrix, CS=Cove	red or Coat	ed Sand Gra	ains.	² Location: F	PL=Pore Lining, M=Matrix.
dric Soil In	dicators: (Applicable to	o all LRRs, ur	nless otherwise n	oted.)			Indicators for P	roblematic Hydric Soils ³ :
Histosol (,		Sandy Red					uck (A9) (LRR C)
_	pedon (A2)		Stripped Ma					uck (A10) (LRR B)
Black Hist					(F1) (except	MLRA 1)		d Vertic (F18)
	ı Sulfide (A4) Layers (A5) (LRR C)		Loamy Gley X Depleted M		(FZ)			ent Material (TF2) Explain in Remarks)
-	k (A9) (LRR D)		Redox Dark		-6)			
_	Below Dark Surface (A1	1)	Depleted D	-				
	k Surface (A12)	,	Redox Dep				³ Indicators of	hydrophytic vegetation and
Sandy Mu	ucky Mineral (S1)		Vernal Pool	s (F9)			wetland hydr	ology must be present,
Sandy Gle	eyed Matrix (S4)						unless dis	sturbed or problematic.
estrictive La	yer (if present):							
Туре:			_					
Depth (incl	hes):		_				Hydric Soil Presen	t? Yes X No
DROLOG	Y							
-	ology Indicators:							
	tors (minimum of one red	quired: check						dicators (2 or more required)
Surface V			Salt Crust (Water N	larks (B1) (Riverine)
Uigh Wate			Diatia Cruct					
	n (A3)		Biotic Crust		(B13)		X Sedime	nt Deposits (B2) (Riverine)
Saturation			Aquatic Inv	ertebrates (X Sedimer X Drift De	nt Deposits (B2) (Riverine) posits (B3) (Riverine)
Saturation Water Ma	n (A3) irks (B1) (Nonriverine) : Deposits (B2) (Nonrive	rine)	Aquatic Inv	ertebrates (Sulfide Odor		g Roots (C	X Sedimer X Drift De Drainag	nt Deposits (B2) (Riverine)
Saturation Water Ma Sediment	irks (B1) (Nonriverine)		Aquatic Inv	ertebrates (Sulfide Odor nizospheres	r (C1) s along Livin	g Roots (C	X Sedimer X Drift Dep Drainag 3) Dry-Sea	nt Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10)
Saturation Water Ma Sediment Drift Depo	rks (B1) (Nonriverine) Deposits (B2) (Nonrive		Aquatic Inv Hydrogen S Oxidized RI Presence o	ertebrates (Sulfide Odor nizospheres f Reduced	r (C1) s along Livin		X Sedimer X Drift De Drainag 3) Dry-Sea Crayfish	nt Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8)
Saturatior Water Ma Sediment Drift Depo Surface S Inundatior	rks (B1) (Nonriverine) Deposits (B2) (Nonrive osits (B3) (Nonriverine) Soil Cracks (B6) n Visible on Aerial Image		Aquatic Inv Hydrogen S Oxidized RI Presence o Recent Iror Thin Muck	ertebrates (Sulfide Odor nizospheres f Reduced Reduction Surface (C7	r (C1) s along Livin Iron (C4) in Tilled Soi 7)		X Sedimen X Drift De ₁ Drainag 3) _ Dry-Sea Crayfish Saturati Shallow	nt Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) Aquitard (D3)
Saturatior Water Ma Sediment Drift Depc Surface S Inundatior	rks (B1) (Nonriverine) Deposits (B2) (Nonrive osits (B3) (Nonriverine) Goil Cracks (B6)		Aquatic Inv Hydrogen S Oxidized RI Presence o Recent Iror	ertebrates (Sulfide Odor nizospheres f Reduced Reduction Surface (C7	r (C1) s along Livin Iron (C4) in Tilled Soi 7)		X Sedimen X Drift De ₁ Drainag 3) _ Dry-Sea Crayfish Saturati Shallow	nt Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9)
 Saturatior Water Ma Sediment Drift Depc Surface S Inundation 	rks (B1) (Nonriverine) Deposits (B2) (Nonrive osits (B3) (Nonriverine) Soil Cracks (B6) n Visible on Aerial Image Soil Cracks (B6)		Aquatic Inv Hydrogen S Oxidized RI Presence o Recent Iror Thin Muck	ertebrates (Sulfide Odor nizospheres f Reduced Reduction Surface (C7	r (C1) s along Livin Iron (C4) in Tilled Soi 7)		X Sedimen X Drift De ₁ Drainag 3) _ Dry-Sea Crayfish Saturati Shallow	nt Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) Aquitard (D3)
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Saturation Water Ma Sediment Drift Depc Surface S Inundation Surface S eld Observa urface Water fater Table Pr aturation Presence	rks (B1) (Nonriverine) Deposits (B2) (Nonriverine) Soil Cracks (B6) n Visible on Aerial Image Soil Cracks (B6) ations: Present? Yes resent? Yes	ery (B7) No X No	Aquatic Inv Hydrogen S Oxidized RI Presence o Recent Iron Thin Muck S Other (Expl X Depth (inc Depth (inc	ertebrates (Sulfide Odor nizospheres f Reduced n Reduction Surface (C7 ain in Rema ches): ches): thes):	r (C1) s along Livin Iron (C4) in Tilled Soi 7) arks) 6 0	Us (C6)	X Sedimention X Drift Degree Drainag Dry-Seation 3) Crayfish Saturati Shallow X FAC-Ne	nt Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) Aquitard (D3) utral Test (D5)
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WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Applicant/Owner:			City/Count	y:	Washoe County State: N		Sampling Date Sampling Poin	e: <u>11/05/2020</u> t: 9
	Gabe Youngblood and Sarah Tona	-	Section T	whethin Panae			, T.20N, R.18E	
Landform (billolong, torro				f (concerve con				
Cubragian (LDD):	ace, etc): Hillslope LRR D Interior Deserts							
					Long:			
	Cassiro gravelly sandy					lassificatio		None
	conditions on the site typical for this time							X N
	_, Soil, or Hydrologys							X No
	_, Soil, or Hydrologyn							
SUMMARY OF FIN	DINGS - Attach site map show	ing samp	oling po	int location	s, transects, im	portant	features, etc).
Hydrophytic Vegetatio		<u>х</u>	_					
Hydric Soil Present?	Yes No	X	_	Is the Sample	d Area			
Wetland Hydrology Pr	esent? Yes No	X		within a Wetla	and? Y	'es	NoX	, .
			-					
Remarks:	a sint manuface unland pair to freak amount		within a a		mented by complete			
Sample	point provides upland pair to fresh emerge	ent wetland	within a s	treambed docu	mented by sample po	oint 8.		
VEGETATION - Use	e scientific names of plants.							
					Dominance Te			
		Absolute	Domina	nt Indicator	Number of Dom			
Tree Stratum (Plot s	size: 30ft)	% Cover			That Are OBL,	FACW, or I	FAC:	0 (A)
		70 00001			-			
2		·			 Total Number o 	f Dominan	t	
0				· · · · · · · · · · · · · · · · · · ·	 Species Across 	All Strata:	: <u> </u>	3 (B)
J				· · · · · · · · · · · · · · · · · · ·	-			
4		0	= Total (Percent of Dom 	inant Spec	cies	
Carling/Chruh Ctratur		0	_ = 10(a) (Jover	That Are OBL,	FACW, or I	FAC:	0.0 (A/B)
	n (Plot size: <u>15ft</u>)	-	V					
	a / Common sagebrush	5	Yes		Prevalence Inc			
2.					Total % C			Iltiply by:
3					_ OBL species	0		
					_ FACW species			
5		· <u> </u>			_ FAC species	0		
		5	_ = Total (Cover	FACU species	16		64
	size:5 ft)				UPL species	0		
1. Elymus ponticus		10	Yes		_ Column Totals:	16	(A)	64 (B)
2. Grindelia squarrosa	· · · ·	5	Yes		_			
	n / Crested wheatgrass	3	No		_ Prevalence	ce Index =	B/A =	4.0
4. Melilotus officinalis	/ Yellow sweetclover	3	No	FACU	-			
5					Hydrophytic V			
6		·			Dominance			
7		·			Prevalence			
8					· ·	-	ations ¹ (Provide	
		21	_ = Total C	Cover	Problemat	ic Hydroph	ytic Vegetation	(Explain)
	(Plot size:)							
1					¹ Indicators of h		•	
2					be present, unle	ess disturb	ed or problema	tic.
		0	= Total C	Cover	Hydrophytic			
% Bare Ground in Her	b Stratum 79 % Cover	of Biotic Cr	rust	0				
					Vegetation	Var	No.	V
					Present?	res	s No	
Remarks:					·			
	ytic vegetation is not dominant.							

S	0	IL	
J	J		-

9

Depth	ption: (Describe to tl Matrix		Redo	x Features				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-12	10YR 4/3	100			<u> </u>		Sandy loam	
					·			
·		<u> </u>			·			
					<u> </u>			
					·			
					·		<u> </u>	
					·	·		
Type: C=Conc	entration, D=Depletio	n, RM=Redu	ced Matrix, CS=Cove	ered or Coat	ed Sand Gr	ains.	² Location	n: PL=Pore Lining, M=Matrix.
ydric Soil Inc	dicators: (Applicable	to all LRRs	unless otherwise	noted.)			Indicators fo	or Problematic Hydric Soils ³ :
Histosol (A	41)		Sandy Rec	lox (S5)			1 cm	Muck (A9) (LRR C)
Histic Epip	pedon (A2)		Stripped N	latrix (S6)			2 cm	Muck (A10) (LRR B)
Black Hist				cky Mineral		t MLRA 1)		iced Vertic (F18)
	Sulfide (A4)			eyed Matrix (F2)			Parent Material (TF2)
	ayers (A5) (LRR C)		Depleted M				Othe	r (Explain in Remarks)
_	k (A9) (LRR D) Delevi Derk Surfage (A 4 4 \		k Surface (F	-			
	Below Dark Surface (/ k Surface (A12)	411)		Dark Surface			³ Indicator	s of hydrophytic vegetation and
	cky Mineral (S1)		Vernal Poo	oressions (Fa	5)			ydrology must be present,
_ ,	eyed Matrix (S4)			JIS (1 5)				disturbed or problematic.
	yer (if present):							
Туре:								
							Hydric Soil Pres	sent? Yes No
Depth (inch emarks: No	o indicators of hydric	soil were obs	erved.					
emarks: No	o indicators of hydric	soil were obs	erved.					
emarks: No DROLOGY	o indicators of hydric	soil were obs	erved.					
emarks: No DROLOGY /etland Hydro	o indicators of hydric							
emarks: No DROLOGY /etland Hydro	o indicators of hydric f blogy Indicators: ors (minimum of one			(B11)			Secondary	y Indicators (2 or more required) r Marks (B1) (Riverine)
emarks: No DROLOGY /etland Hydro rimary Indicat Surface W	o indicators of hydric f blogy Indicators: ors (minimum of one		ck all that apply)	. ,			<u>Secondar</u>	y Indicators (2 or more required)
emarks: No DROLOGY /etland Hydro rimary Indicat Surface W	o indicators of hydric f blogy Indicators: ors (minimum of one /ater (A1) er Table (A2)		<u>ck all that apply)</u> Salt Crust Biotic Crus	. ,	B13)		Secondar Wate Sedir	y Indicators (2 or more required) r Marks (B1) (Riverine)
emarks: No DROLOGY /etland Hydro rimary Indicat Surface W High Wate Saturation	o indicators of hydric f blogy Indicators: ors (minimum of one /ater (A1) er Table (A2)	required: che	<u>ck all that apply)</u> Salt Crust Biotic Crus Aquatic Inv	st (B12)	,		<u>Secondar</u> Wate Sedir Drift	y Indicators (2 or more required) r Marks (B1) (Riverine) ment Deposits (B2) (Riverine)
emarks: No DROLOGY Vetland Hydro rimary Indicat Carland Hydro rimary Indicat Surface W High Wate Saturation Water Mar Sediment	o indicators of hydric f blogy Indicators: ors (minimum of one /ater (A1) er Table (A2) i (A3) rks (B1) (Nonriverine Deposits (B2) (Nonri	required: che) verine)	ck all that apply) Salt Crust Biotic Crust Aquatic Inv Hydrogen Oxidized F	st (B12) vertebrates (Sulfide Odor Rhizospheres	· (C1) along Livir	ng Roots (C	Secondar Wate Sedir Drift Drair 3) Dry-5	y Indicators (2 or more required) rr Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) mage Patterns (B10) Season Water Table (C2)
emarks: No DROLOGY Vetland Hydro rimary Indicat Gurface W High Wate Saturation Water Mar Sediment Drift Depo	o indicators of hydric o indicators of hydric ors (minimum of one /ater (A1) er Table (A2) (A3) rks (B1) (Nonriverine Deposits (B2) (Nonri sits (B3) (Nonriverine	required: che) verine)	ck all that apply) Salt Crust Biotic Crus Aquatic Inv Hydrogen Oxidized F Presence of	vertebrates (Sulfide Odor Rhizospheres	(C1) along Livir ron (C4)		Secondar Sedir Sedir Drift Drair 3) Dry-S Crayt	y Indicators (2 or more required) rr Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8)
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emarks: No DROLOGY /etland Hydro rimary Indicat Surface W High Wate Saturation Water Mar Sediment Drift Depo Surface Se Inundation	o indicators of hydric o indicators of hydric ors (minimum of one /ater (A1) er Table (A2) i (A3) rks (B1) (Nonriverine Deposits (B2) (Nonri sits (B3) (Nonriverin oil Cracks (B6)	required: che) verine) e)	ck all that apply) Salt Crust Biotic Crust Aquatic Inv Hydrogen Oxidized F Presence of Recent Iro Thin Muck	t (B12) vertebrates (Sulfide Odor Rhizospheres of Reduced I n Reduction	r (C1) s along Livir iron (C4) in Tilled So)		Secondar Wate Sedir Drift 3) Dry-S Cray Satu Satu Shall	y Indicators (2 or more required) r Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C8
emarks: National Antiperson Service S	o indicators of hydric o indicators of hydric ors (minimum of one /ater (A1) er Table (A2) i (A3) rks (B1) (Nonriverine Deposits (B2) (Nonri sits (B3) (Nonriverine oil Cracks (B6) i Visible on Aerial Ima oil Cracks (B6)	required: che) verine) le) lgery (B7)	ck all that apply) Salt Crust Biotic Crust Aquatic Im Hydrogen Oxidized F Presence of Recent Iro Thin Muck Other (Exp	tt (B12) vertebrates (Sulfide Odor khizospheres of Reduced I n Reduction Surface (C7 plain in Rema	r (C1) s along Livir iron (C4) in Tilled So)		Secondar Wate Sedir Drift 3) Dry-S Cray Satu Satu Shall	y Indicators (2 or more required) er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (CS ow Aquitard (D3)
emarks: National Antiperson Service S	o indicators of hydric o indicators of hydric ology Indicators: ors (minimum of one /ater (A1) er Table (A2) (A3) rks (B1) (Nonriverine Deposits (B2) (Nonri sits (B3) (Nonriverine oil Cracks (B6) n Visible on Aerial Ima oil Cracks (B6) tions: Present? Ye	required: che) verine) ie) igery (B7)	ck all that apply) Salt Crust Biotic Crus Aquatic Im Hydrogen Oxidized F Presence of Recent Iro Thin Muck Other (Exp o X Depth (in	t (B12) vertebrates (Sulfide Odor khizospheres of Reduced I n Reduction Surface (C7 olain in Rema ches):	(C1) s along Livir ron (C4) in Tilled So) arks)		Secondar Wate Sedir Drift 3) Dry-S Cray Satu Satu Shall	y Indicators (2 or more required) er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (CS ow Aquitard (D3)
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Sampling Point: 10 Feature ID:	D-3a, D-3b Date: 11/6/2020					
Project: Zayo Nevada Reroute						
Location: Washoe County Photo begin/end file#: See Field Photos						
Investigator(s): Gabe Youngblood & Sarah Tona						
Y x / N Do normal circumstances exist on the site?	Location Details:					
Y / N x Is the site significantly disturbed?	Along Highway 395					
	Projection: Lambert Datum: NAD83					
	Coordinates: 39.641491, -119.950349					
Potential anthropogenic influences on the channel system: Channel does not appear to have been manipulated.						
Brief site description:						
Small ephemeral stream flows from hills north of the	highway to culvert. At the sample point					
location there are two separate channels separated by	y an upland island.					
Checklist of resources (if available):						
x Aerial photography Stream gage data						
Dates: Gage number:						
x Topographic maps Period of record:						
	effective discharges					
Vegetation maps Results of flood fr						
x Soils maps Most recent shift						
	2-, 5-, 10-, and 25-year events and the					
	t exceeding a 5-year event					
x Global positioning system (GPS)						
Other studies:						
Hydrogeomorphic Floo	odplain Units					
Active Floodplain	↓Low Terrace					
Low-Flow Channels	OHWM Paleo Channel					
Procedure for identifying and characterizing the floodplain u	units to assist in identifying the OHWM:					
1. Walk the channel and floodplain within the study area to get an in present at the site.						
2. Select a representative cross section across the channel. Draw the	e 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 siz unit.	e) and the vegetation characteristics of the floodplain					
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:						
Mapping on aerial photograph	x GPS					
Digitized on computer	Other:					

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Inches (in)	Millimeters (mm)	Wentworth size class					
10.08 —	· — – 256 — –	Boulder					
2.56 —	64	· — — —					
0.157	4						
0.079 —	2.00	Granule					
0.039 —	1.00	Very coarse sand Coarse sand					
0.020 —	0.50						
1/2 0.0098 —	— — 0.25 — —	Medium sand 0					
1/4 0.005 —	— — 0.125 — —	Fine sand					
1/8 — 0.0025 —	0.0625	Very fine sand					
1/16 0.0012 -	— — 0.031 — —	Coarse silt Medium silt					
1/32 0.00061	— —	<u>sit</u> – – – – – .					
1/64 0.00031 —	· 0.0078 — _	Fine silt					
1/128 - 0.00015-	0.0039						
		Clay Phy					

Wentworth Size Classes

Feature ID: D-3a, D-3b Cross sect	ion ID:	Date: 11/6/2020	Time:
Cross section drawing:			
OHWM OH	Μ	OH WM	OHVM
онwм			
GPS point: <u>39.641491</u> , -119.950349			
Indicators:	-	-	
x Change in average sediment text	ure 2	x Break in bank slope	
x Change in vegetation species	Ļ	Other:	
x Change in vegetation cover	L	Other:	
Comments:			
Scoured channel bottom dominate			-
Sparse herbaceous vegetation in cl	iannel give w	ay to denser herbaceous v	egetation and shrubs at
the OHWM.			
	<u></u>		· -
Floodplain unit: x Low-Flow (Jhannel	x Active Floodplain	Low Terrace
GPS point:			
Characteristics of the floodplain unit:	1		
	l and sand % Shrub: 0	% Herb: 10 %	
Total veg cover: <u>10</u> % Tree: <u>0</u>	% Shrub: <u>0</u>	% Herb: <u>10</u> %	
Community successional stage:		baceous, shrubs, saplings)	
x Early (herbaceous & seedlings)		rbaceous, shrubs, sapings)	
		ibaceous, sinubs, mature tree	:5)
Indicators:			
Mudcracks	Soil developr	ment	
Ripples	Surface relief		
x Drift and/or debris	Other:	1	
x Presence of bed and bank	Other:		
Benches	Other:		
Comments:			
Scoured channel bottom dominate	d hy gravel ar	nd sand has snarse vegeter	tion Low flow channel is
also the active floodplain in this sr			
and active mouphann in this of			

Feature ID: D-3a, D-3	3b Cross section ID:	Date: 11/6/202	20 Time:
Floodplain unit:	Low-Flow Channel	Active Floodplain	x Low Terrace
GPS point:			
di 5 point.			
Characteristics of the fl	•		
Average sediment text			
Total veg cover: 90	% Tree:% Shrub:	<u>20</u> % Herb: <u>70</u> %	
Community succession	al stage:		
NA	x Mid (her	baceous, shrubs, saplings)
Early (herbaceous	s & seedlings)	baceous, shrubs, mature	trees)
		,,,	,
Indicators:			
		+	
Mudcracks	x Soil developm		
Ripples	Surface relief		
Drift and/or debris	Other:		
Presence of bed and	d bank Other:		
Benches			
Comments:			
Scoured channel bott	tom dominated by gravel an	d sand gives way to ba	ank with sandy loam soil.
			s as densly vegetated as the
banks with no OHW	_		is as defisity vegetated as the
	M mulcators.		
et a datat a str			
Floodplain unit:	Low-Flow Channel	Active Floodplain	Low Terrace
GPS point:			
Characteristics of the fl	oodplain unit:		
Average sediment text	ure:		
Total veg cover:		% Herb: %	
Community succession			
		baceous, shrubs, saplings)
Early (herbaceous		baceous, shrubs, mature	trees)
Indicators:	_		
Mudcracks	Soil developn	nent	
Ripples	Surface relief		
Drift and/or debris	Other:		
Presence of bed and	d bank Other:		
Benches	Other:		
Comments:			
comments.			

APPENDIX E PLANT LIST

Scientific Name ¹	Common Name	Wetland Indicator Status ²
Agropyron cristatum	crested wheatgrass	Upland
Artemisia tridentata	big sagebrush	Upland
Asclepias fascicularis	narrow-leaf milkweed	Facultative
Bromus tectorum	cheatgrass	Upland
Carduus nutans	musk thistle	Facultative Upland
Conium maculatum	poison hemlock	Facultative Wetland
Elymus ponticus	tall wheat grass	Upland
Epilobium ciliatum	Slender willow herb	Facultative Wetland
Ericameria nauseosa	ruber rabbitbrush	Upland
Grindelia squarrosa	curlycup gumweed	Facultative Upland
Juncus balticus ³	Baltic rush	Facultative Wetland
Lepidium latifolium	perennial pepperweed	Facultative
Melilotus officinalis	yellow sweetclover	Facultative Upland
Mentha arvensis	field mint	Facultative Wetland
Phalaris arundinacea	reed canary grass	Facultative Wetland
Polypogon australis	Chilean beard grass	Facultative Wetland
Populus fremontii ⁴	Fremont cottonwood	Facultative
Purshia tridentata	bitterbrush	Upland
Rosa woodsii	interior rose	Facultative Upland
Rumex salicifolius	willow dock	Facultative Wetland
Salix exigua	sandbar willow	Facultative Wetland
Salix geyeriana	Geyer's willow	Obligate
Salix lemmonii	Lemmon's willow	Facultative Wetland
Typha latifolia	broad-leaf cattail	Obligate
Veronica americana	American brooklime	Obligate

Notes:

¹ Taxonomic nomenclature for plant species followed Baldwin, B. G.,D. H. Goldman, R. P. D. J. Keil ,T. J. Rosatti, and D. H. Wilken. 2012 *The Jepson Manual: Vascular Plants of California*. 2nd ed. Berkeley, California: University of California Press.

² Wetland indicator status for plant species followed United States Army Corps of Engineers. 2018. National Wetland Plant List, Version 3.4. Available at: http://wetland-plants.usace.army.mil/. Accessed November 2020.

³ Juncus arcticus ssp. littoralis on datasheets.

⁴ Populus deltoides in National Wetland Plant List, Version 3.4.

APPENDIX F REPRESENTATIVE PHOTOGRAPHS

The following photographs are documentation of conditions within the study area during the field delineation conducted from November 4, 2020, to November 6, 2020.

