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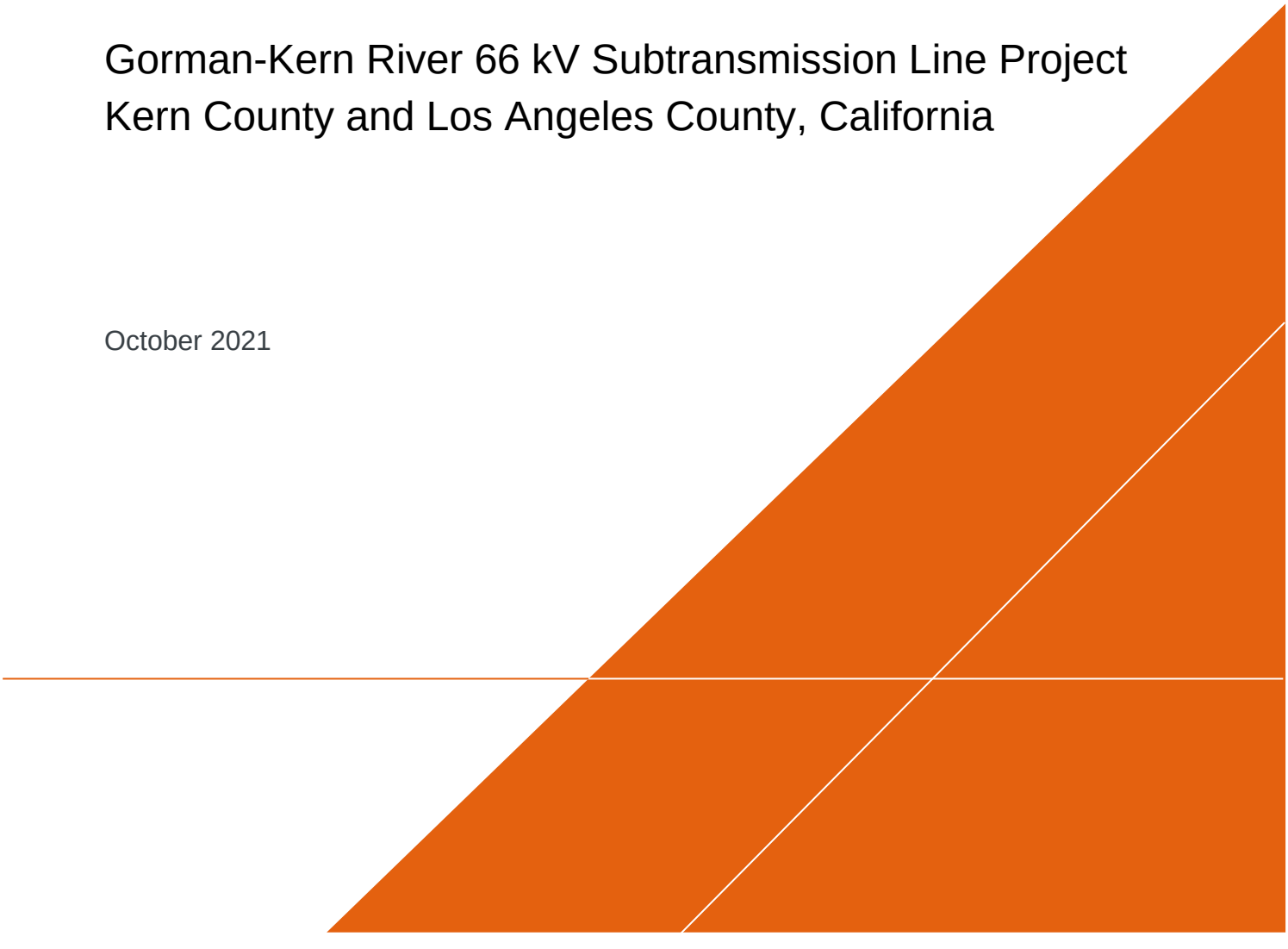
WETLANDS AND OTHER WATERS JURISDICTIONAL DELINEATION REPORT

Gorman-Kern River 66 kV Subtransmission Line Project
Kern County and Los Angeles County, California

October 2021



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Gorman-Kern River 66 kV Subtransmission Line Project, Kern County and Los Angeles County

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TABLES

ATTACHMENTS

ACRONYMS AND ABBREVIATIONS

amsl	above mean sea level
Arcadis	Arcadis U.S., Inc.
CAISO	California Independent System Operator
CDFW	California Department of Fish and Wildlife
CFR	Code of Federal Regulations
CPUC	California Public Utilities Commission
CWA	Clean Water Act
°F	degrees Fahrenheit
FAC	Facultative (wetland indicator status)
FACU	Facultative upland species
FACW	Facultative wetland species
GKR	Gorman-Kern River
GO 95	General Order 95, Rules for Overhead Electric Line Construction
GPS	Global Positioning System
HR	Hydrologic Region
HUC	Hydrologic Unit Code
LiDAR	Light Detection and Ranging
m	meters
mm	millimeters
NERC	North American Electric Reliability Corporation
NRCS	National Resource Conservation Service
OBL	obligate wetland species
OHWM	ordinary high water mark
PEA	Proponent's Environmental Assessment
Porter-Cologne	Porter-Cologne Water Quality Control Act
Project	Gorman - Kern River 66kV Subtransmission Line Project
RPW	relatively permanent waters
RWQCB	Regional Water Quality Control Board
SCE	Southern California Edison Company
SWRCB	State Water Resources Control Board
TLRR	Transmission Line Rating Remediation
TNW	traditional navigable waters
USACE	United States Army Corps of Engineers
USGS	United States Geological Survey

1 INTRODUCTION

Arcadis U.S., Inc. (Arcadis) was retained by Southern California Edison Company (SCE) to conduct a jurisdictional delineation to determine the extent of Waters of the United States (U.S.), including wetlands, pursuant to the federal Clean Water Act (CWA) Section 404 regulated by the United States Army Corps of Engineers (USACE), and CWA 401 and the Porter-Cologne Water Quality Control Act (Porter-Cologne) regulated by the Regional Water Quality Control Board (RWQCB). The delineation also identified the extent of lakes, rivers, or streambeds and associated riparian vegetation pursuant to the California Fish and Game Code Section 1600-1617, regulated by the California Department of Fish and Wildlife (CDFW), along the Gorman-Kern River 66 kV Subtransmission Line Project (GKR Project) in Kern and Los Angeles counties, California.

The results of this delineation will be used to support the Project's design and implementation and to maximize avoidance and minimization of impacts on jurisdictional waters, including wetlands; to prepare a Proponent's Environmental Assessment (PEA); to support additional environmental assessment and permitting as needed; and to obtain permits for construction, if required.

1.1 Gorman-Kern River Project Background

The GKR Project's northern terminus is at the Kern River 1 Hydroelectric Substation located approximately 13 miles east-northeast of the City of Bakersfield along California State Route 178 (SR 178) in the Kern River Canyon. The GKR Project's eastern terminus is at Banducci Substation, located west-southwest of the City of Tehachapi. The GKR Project's southern terminus is at Gorman Substation, located east of the community of Gorman.

The GKR Project contains five distinct Segments:

- Segment 1 spans approximately 20.4 miles from the existing Kern River 1 Hydroelectric Substation to and including Structure M20-T3 (a location referred to as "the T"). The existing structures in Segment 1 support portions of the Gorman-Kern River and Banducci-Kern River 66 kV subtransmission lines.
- Segment 2 spans approximately 26.5 miles from Structure M20-T3 to and including Structure M46-T6. The existing structures in Segment 2 support portions of the Gorman-Kern River 66 kV Subtransmission Line.
- Segment 3 spans approximately 4.1 miles from Structure M46-T6 to the existing Gorman Substation. The existing structures in Segment 3 support portions of the Gorman-Kern River and Frazier Park-Gorman 66 kV subtransmission lines.
- Segment 4 spans approximately 11.3 miles from Structure M20-T3 to and including Structure M11-T3. The existing structures in Segment 4 support portions of the Banducci-Kern River 66 kV Subtransmission Line.
- Segment 5 spans approximately 3 miles from Pole X7666E to the existing Banducci Substation. The existing structures in Segment 5 support portions of the Banducci-Kern River 66 kV Subtransmission Line, distribution circuitry, and telecommunications infrastructure.

2 PROJECT LOCATION

The GKR Project is located in Kern County, Los Angeles County, and the cities of Arvin and Bakersfield. The GKR Project's northern terminus is at the Kern River 1 Hydroelectric Substation located approximately 13 miles east-northeast of the City of Bakersfield along California State Route 178 (SR 178) in the Kern River Canyon. The GKR Project's eastern terminus is at Banducci Substation, located west-southwest of the City of Tehachapi. The GKR Project's southern terminus is at Gorman Substation, located east of the community of Gorman (Attachment A, Figure 1).

Specifically, the Project is located on the U.S. Geological Survey *Rio Bravo Ranch, Edison, Arvin, Tejon Hills, Pastoria Creek, Grapevine, Frazier Mountain, Lebec, Bear Mountain, Tejon Ranch, and Cummings Mountain* 7.5-minute quadrangles.

3 ENVIRONMENTAL SETTING

The GKR Project alignment is located within the Central Valley and the Tehachapi and Greenhorn mountains. Yearly precipitation in Bakersfield averages 5.8 inches (14.7 centimeters), with an average 11.7 inches (29.7 centimeters) at Tejon Ranch. The highest rainfall is recorded during the winter months (December to March), when frontal systems bring about 1 to 2 inches (2.5 to 5 centimeters) to the area each month, depending on the location. Generally, summer thundershowers don't provide reliable precipitation on an annual basis (Western Regional Climate Center 2019).

Temperatures in the Bakersfield area exhibit seasonal extremes, with a mean annual temperature of 64.1 degrees Fahrenheit (°F), an average maximum July temperature of 100.9°F, and an average January minimum temperature of 35.3°F. An average of 118.3 days reach temperatures above 90°F each year, with average yearly temperatures below freezing recorded for 35.3 days (Western Regional Climate Center 2019). At Tejon Ranch, the mean annual temperature is 63.6°F, with an average July maximum of 95.9°F and a January minimum of 36.6°F.

3.1 Topography

The GKR Project occurs at the confluence of several mountain ranges. The northern terminus of the GKR Project alignment is located in the Kern River drainage in the southern Sierra Nevada at the Kern River 1 Hydroelectric Substation. From there, the alignment passes south through a portion of the San Joaquin Valley before traversing north-facing Grapevine Canyon, which separates the San Emigdio Mountains to the west and the Tehachapi Mountains to the east and the Sierra Pelona Mountains to the southeast. The Tehachapi Mountains link the southern Sierra Nevada to the northeast with the Transverse Ranges to the south, and also separate the San Joaquin Valley to the northwest from the Mojave Desert to the southeast. The west-east running portion of the GKR Project alignment segment extends east through the Tehachapi Mountains to its terminus at the Banducci Substation.

The GKR Project alignment intersects major mountain ranges that link the Coast Ranges and Transverse Ranges with the Sierra Nevada. The Tehachapi Mountains merge with the southern Sierra Nevada in the northeast; the San Emigdio and Sierra Pelona Mountains at the southern end of the Project alignment link with the Transverse Ranges to the south; and, to the north, the San Emigdio Mountains eventually link with other Transverse Ranges and the southern end of the inner Coast Ranges. Elevation in the Project

area ranges from a low of approximately 600 feet above mean sea level (amsl) to a high of approximately 5,000 feet amsl.

3.2 Hydrology

Surface waters are delineated by the United States Geological Survey (USGS), which divides surface waters into successively smaller hydrologic units classified into four levels: regions, sub-regions, accounting units, and cataloging units. The hydrologic units are arranged within each other, from the smallest (cataloging units) to the largest (regions). Each hydrologic unit is identified by a unique hydrologic unit code (HUC) consisting of two to eight digits based on the four levels of classification in the hydrologic unit system. The first level of classification divides the Nation into 21 major geographic areas, or regions. The second level of classification divides the 21 regions into 221 sub-regions. A sub-region includes the area drained by a river system, a reach of a river and its tributaries in that reach, a closed basin(s), or a group of streams forming a coastal drainage area. The third level of classification subdivides many of the sub-regions into accounting units. The fourth level of classification is the cataloging unit, the smallest element in the hierarchy of hydrologic units. A cataloging unit is a geographic area representing part or all of a surface drainage basin, a combination of drainage basins, or a distinct hydrologic feature (sometimes referred to as watersheds).

The GKR Project alignment is within the California Region (18) and the Tulare-Buena Vista Lakes Subregion (1803). The GKR Project is located within the following sub-watershed HUs: Cottonwood Creek-Kern River (1803000301), Pleitito Creek-Kern Lake Bed (1803000312), Caliente Creek (1803000304), Lake Paulina-Comanche Creek (1803000306), Caparell Creek-Frontal Kern Lake Bed (1803000310), Tejon Creek (1803000305), El Paso Creek (1803000308), Liveoak Canyon-Pastoria Creek (1803000309), Grapevine Creek (1803000307), and Upper Piru Creek (1807010205). The Kern River is the major surface water feature along the Project alignment.

3.3 Water Quality

3.3.1 Beneficial Uses

The Project is located within the Los Angeles RWQCB Los Angeles Region Basin Plan California (RWQCB 2014) and the Central Valley RWQCB Tulare Lake basin (RWQCB 2015). The Basin Plans identify beneficial uses and water quality objectives that are the water quality standards for each Region. Beneficial uses for drainages located within the Project area are shown below in Table 1 identified by each RWQCB; the primary beneficial uses as determined by prevalence are as follows:

- **AGR.** Agricultural Supply. Beneficial uses of waters used for farming, horticulture, or ranching, including, but not limited to, irrigation, stock watering, and support of vegetation for range grazing.
- **AQUA.** Aquaculture Uses of water for aquaculture or agriculture operations including, but not limited to, propagation, cultivation, maintenance, or harvesting of aquatic plants and animals for human consumption or bait purposes
- **BIOL.** Preservation of Biological Habitats of Special Significance Uses of water that support designated areas or habitats, such as established refuges, parks, sanctuaries, ecological reserves, or

Areas of Special Biological Significance (ASBS), where the preservation or enhancement of natural resources requires special protection.

- **COLD.** Cold Freshwater Habitat. Uses of water that support cold water ecosystems, including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates
- **COMM.** Commercial and Sportfishing. Beneficial uses of waters used for commercial or recreational collection of fish or other organisms including, but not limited to, uses involving organisms intended for human consumption.
- **EST.** Estuarine Habitat. Use of water that supports estuarine ecosystems, including but not limited to, preservation or enhancement for vegetation, fish, shellfish, or wildlife (e.g., estuarine mammals, waterfowl, shorebirds), and the propagation, sustenance, and migration of estuarine organisms.
- **FRSH.** Freshwater Replenishment. Uses of water for natural or artificial maintenance of surface water quantity or quality
- **GWR.** Ground Water Recharge. Beneficial uses of waters used for natural or artificial recharge of ground water for purposes of future extraction, maintenance of water quality, or halting of saltwater intrusion into freshwater aquifers.
- **IND.** Industrial Service Supply. Beneficial uses of water for industrial activities that do not depend primarily on water quality, including, but not limited to mining, cooling water supply, geothermal energy production, hydraulic conveyance, gravel washing fire protection, and oil well repressurization.
- **LREC-1.** Limited Water Contact Recreation. Uses of water for recreational activities involving body contact with water
- **MAR.** Marine Habitat. Support marine ecosystems, including, but not limited to, preservation or enhancement of marine habitats, vegetation such as kelp, fish, shellfish, or wildlife.
- **MUN.** Municipal and Domestic Supply. Beneficial uses of waters used for community, military, or individual water supply systems including, but not limited to, drinking water supply.
- **NAV.** Navigation. Uses of water for shipping, travel, or other transportation by private, military, or commercial vessels.
- **POW.** Hydropower Generation. Uses of water for hydropower generation.
- **RARE.** Preservation of Rare, Threatened or Endangered Species. Uses of waters that support habitats necessary for the survival and successful maintenance of plant or animal species established under state and/or federal law as rare, threatened, or endangered.
- **REC-1.** Water Contact Recreation. Beneficial uses of waters used for recreational activities involving body contact with water where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white water activities, fishing, and use of natural hot springs.
- **REC-2.** Noncontact Water Recreation. Beneficial uses of waters used for recreational activities involving proximity to water, but not normally involving body contact with water where ingestion of

water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, and aesthetic enjoyment in conjunction with the above activities.

- **SAL.** Inland Saline Water Habitat Beneficial uses of waters that support inland saline water ecosystems including, but not limited to, preservation and enhancement of aquatic saline habitats, vegetation, fish, and wildlife, including invertebrate
- **WARM.** Warm Freshwater Habitat. Beneficial uses of waters that support warm water ecosystems including, but not limited to, preservation and enhancement of aquatic habitats, vegetation, fish, and wildlife, including invertebrates.
- **WILD.** Wildlife Habitat. Beneficial uses of waters that support wildlife habitats including, but not limited to, the preservation and enhancement of vegetation and prey species used by wildlife, such as waterfowl.

3.3.2 Impaired Water Bodies, CWA Section 303(d)

Listing a water body as impaired in California is governed by the Water Quality Policy for developing California CWA, Section 303(d) Listing Policy. The state and regional boards assess water quality data for California's waters every two years to determine if they contain pollutants at levels that exceed protective water quality criteria and standards. This biennial assessment is required under Section 303(d) of the CWA.

Based on this assessment, there are no impaired water bodies in the Project area.

Table 1. Beneficial Uses for Drainages Located within the Project Area

Feature	MUN	AGR	PRO	IND	GWR	FRSH	NAV	POW	REC-1	REC-2	COMM	AQUA	COLD	WARM	SAL	WILD	BIOL	RARE	MIGR	SPWN	WQE	FLD	SHELL	EST	WET	LREC-1
Central Valley (R5)	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x				x		
Los Angeles Region (R4)	x	x	x	x	x	x	x	x	x	x	x	x	X	x		x	x	x	x	x			x	x	x	x

MUN – Municipal and Domestic Supply
AGR – Agricultural Supply
PRO – Industrial Process Supply
WILD – Wildlife Habitat
IND – Industrial Service Supply
GWR – Ground Water Recharge
FRSH – Freshwater Replenishment
NAV – Navigation
POW Hydropower Generation
REC1 – Water Contact Recreation
REC2 – Non-contact Water Recreation
COMM – Commercial and Sport Fishing
AQUA – Aquaculture
COLD – Cold Freshwater Habitat
WARM – Warm Freshwater Habitat
SAL – Inland Saline Water Habitat
BIOL – Preservation of Biological Habitats of Special Significance
RARE – Rare, Threatened or Endangered Species
MGR – Migration of Aquatic Organisms
SPWN – Spawning, Reproduction, and Development
WQE – Water Quality Enhancement
FLD – Flood Peak Attenuation/Flood Water Storage
X – Existing Beneficial Uses
SHELL- Shellfish harvesting
EST – Estuarine Habitat
WET – Wetland Habitat
LREC-1 Limited Water Contact Recreation

3.4 Soils

The GKR Project is located within the Soil Survey of Kern County, California Southwestern Part (National Resource Conservation Service [NRCS] 2009), Soil Survey of Kern County Southeastern Part (NRCS 1981), Soil Survey of Kern County Northeastern Part and Southeastern Part of Tulare County (NRCS 2007), Soil Survey of Antelope Valley Area California (NRCS 1970), and Soil Survey of Sequoia National Forest Parts of Fresno, Kern, Tulare Counties of California (NRCS 1996). The Project area is characterized by several soil types. Soils in a portion of the Project are not available. Soil maps are provided in Attachment C.

Detailed soil map units within the survey area and associated access roads are provided in Table 3.

Table 2. Hydric Soil Map Units

Soil Map Unit*	Description	Hydric Criteria*
13	Bitcreek-Dibble-Eaglerest complex, 15 to 50 percent slopes	4
14	Brecken-Cuyama-Pleito complex, 15 to 60 percent slopes	4
15	Calicreek loamy coarse sand, 0 to 2 percent slopes, occasionally flooded	4
16	Calicreek loamy coarse sand, 0 to 2 percent slopes, rarely flooded	4
17	Calicreek sandy loam, 0 to 2 percent slopes, occasionally flooded	4
20	Chanac-Pleito complex, 2 to 5 percent slopes	2, 4
22	Chanac-Pleito complex, 5 to 30 percent slopes	2, 3, 4
26	Chino loam	2
27	Chuchupate gravelly sandy loam, 50 to 75 percent slopes	2, 4
29	Cieneba-Vista-Rock outcrop complex, 30 to 60 percent slopes	4
39	Dune land	2, 3
43	Excelsior sandy loam, 0 to 2 percent slopes, MLRA 17	4
44	Feethill-Vista-Walong association, 15 to 60 percent slopes	4
45	Fluvents, ponded	3
46	Frazier very gravelly sandy loam, 50 to 75 percent slopes	2
48	Geghus-Tecuya association, 30 to 75 percent slopes	2, 4
49	Geghus-Tecuya association, 9 to 30 percent slopes	2, 4
51	Gorman-Typic Xerorthents, mesic-Xerorthents, shallow, complex, 30 to 100 percent slopes	2, 4
52	Gorman sandy loam, 15 to 30 percent slopes, eroded	2
53	Gorman sandy loam, 15 to 50 percent slopes	2
54	Gorman sandy loam, 30 to 50 percent slopes, eroded	2
56	Gorman sandy loam, 9 to 15 percent slopes, eroded	2

Table 2. Hydric Soil Map Units

Soil Map Unit*	Description	Hydric Criteria*
57	Guijarral-Klipstein complex, 2 to 5 percent slopes	4
58	Guijarral sandy loam, 0 to 2 percent slopes	4
59	Guijarral sandy loam, 2 to 9 percent slopes	4
60	Gullied land	2, 3, 4
70	Hawk gravelly sandy loam, 9 to 15 percent slopes	2, 4
71	Hesperia loamy sand, 0 to 2 percent slopes	2, 4
72	Hesperia sandy loam, 0 to 2 percent slopes	2, 3
75	Klipstein-Guijarral complex, 5 to 15 percent slopes	4
77	Loslobos-Walong association, 5 to 30 percent slopes	2, 4
78	Millsholm rocky loam, 30 to 50 percent slopes, eroded	2
80	Nord fine sandy loam, 0 to 2 percent slopes, rarely flooded	4
82	Oak Glen loam, 2 to 9 percent slopes	3
85	Pits	4
86	Pits and dumps	4
90	Pleito-Delvar complex, 2 to 15 percent slopes	4
92	Pleito-Trigo-Chanac complex, 15 to 50 percent slopes	2, 4
93	Pleito gravelly sandy clay loam, 2 to 5 percent slopes	2, 4
94	Pleito sandy clay loam, 2 to 5 percent slopes	2, 5
95	Pleito sandy clay loam, 5 to 9 percent slopes	2, 6
96	Pleito sandy clay loam, 9 to 50 percent slopes	2, 7
97	Premier sandy loam, 0 to 2 percent slopes	4
98	Premier sandy loam, 2 to 5 percent slopes	4
102	Riverwash	4
104	Rough broken land	4
105	Sandy alluvial land	4
108	Steuber sandy loam, 0 to 2 percent slopes	4
121	Vineland-Bakersfield complex, 0 to 1 percent slopes, drained	4
128	Walong sandy loam, 15 to 30 percent slopes	4
129	Walong sandy loam, 30 to 50 percent slopes	4
131	Water	Null
133	Whitewolf-Riverwash complex, 0 to 5 percent slopes, frequently flooded	4
135	Whitewolf loamy sand, 0 to 2 percent slopes, occasionally flooded	4

Table 2. Hydric Soil Map Units

Soil Map Unit*	Description	Hydric Criteria*
139	Xeric Torriorthents-Badlands complex, 30 to 75 percent slopes	2, 4
140	Xeric Torriorthents-Calcic Haploxerepts association, 15 to 60 percent slopes	2, 4
141	Xerofluvents, 0 to 5 percent slopes	4
142	Xerofluvents, occasionally flooded-Riverwash complex, 0 to 5 percent slopes	4

Notes:
1. All Histels except Folistels and Histosols except Folists; or
2. Map unit components in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, or Andic, Cumulic, Pachic, or Vitrandic subgroups that:
   a. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
   b. Show evidence that the soil meets the definition of a hydric soil;
3. Map unit components that are frequently ponded for long duration or very long duration during the growing season that:
   a. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
   b. Show evidence that the soil meets the definition of a hydric soil; or
4. Map unit components that are frequently flooded for long duration or very long duration during the growing season that:
   a. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
   b. Show evidence that the soils meet the definition of a hydric soil.

* Soil map units were not confirmed in the field.

4 VEGETATION COMMUNITIES

Thirty-three vegetation types were identified on or near the Project area during the 2017 - 2019 surveys, including ten woodland vegetation types (California Buckeye Groves, California Sycamore – Coast Live Oak Riparian Woodlands, Fremont Cottonwood Forest and Woodland, Canyon Live Oak Forest and Woodland, Blue Oak Woodland and Forest, Valley Oak Woodland and Forest, Valley Oak Riparian Forest and Woodland, Mixed Oak Forest and Woodland, Goodding's Willow - Red Willow Riparian Woodland and Forest, and Shining Willow Groves); twelve shrubland vegetation types (Cheesebush – Sweetbush Scrub, Mulefat Thickets, Wedge Leaf Ceanothus/Buck Brush Chaparral, Acton's and Virgin River Brittle Brush – Net-veined Goldeneye Scrub, California Joint-fir - Longleaf Joint-fir Scrub, Narrowleaf Goldenbush – Bladderpod Scrub, Rubber Rabbitbrush Scrub, California Buckwheat Scrub, Scalebroom Scrub, Tucker Oak Chaparral, Arroyo Willow Thickets, and Tamarisk Thickets); and eleven herbaceous communities (Yerba Mansa – Nuttall's Sunflower – Nevada Goldenrod Alkaline Wet Meadows, Salt Grass Flats, Baltic and Mexican Rush Marshes, Ashy Ryegrass - Creeping Rye Grass Turfs, Common Monkey Flower Seeps, Needle Grass – Melic Grass Grasslands, American Bulrush Marsh, Wild Oats and Annual Brome Grasslands, Red Brome or Mediterranean Grass Grassland, Cheatgrass – Medusahead Grassland, and Perennial Pepper Weed – Prickly Lettuce Patches). Five additional types were also mapped, Active Agricultural, Ornamental/Landscaped, Open Water, Developed and Disturbed Habitat.

The National Wetland Plant List (Lichvar et al. 2016) designates wetland indicator species based on their occurrence in wetland habitats at least some of the time. For the purposes of this report, wetland indicator plants are identified as obligate species (OBL), facultative wetland species (FACW), and/or facultative species (FAC). Natural communities dominated (>50 percent relative cover) by wetland indicator plants

are listed first in Section 4.1 below, followed by upland vegetation types (Section 4.2). All observed alliances and/or associations within the survey area are shown in Table 3 along with the wetland indicator status of the dominant species.

Table 3. Vegetation Alliances and Associations Mapped within the Survey Area

Alliance Name	Alliance Scientific Name	Association(s)	Wetland Indicator Status for Dominant Species in Alliance[1]
Natural Communities Dominated by Species with Wetland Indicator Status of FAC, FACW, OBL			
Woodland Alliances			
California Sycamore – Coast Live Oak Riparian Woodlands	*Platanus racemosa – Quercus agrifolia* Woodland Alliance	*Platanus racemosa – Salix laevigata / Salix lasiolepis – Baccharis salicifolia* Association	FACW
Goodding's Willow - Red Willow Riparian Woodland and Forest	*Salix gooddingii - Salix laevigata* Woodland Alliance	*Salix laevigata* Association *Salix laevigata / Salix lasiolepis* Association	FACW
Shining Willow Groves	*Salix lucida Woodland Alliance*	*Salix lucida* subsp. *lasiandra* Association *Salix lucida* subsp. *lasiandra / Urtica urens – Urtica dioica* Association	FACW
Fremont Cottonwood Forest and Woodland	*Populus fremontii – Fraxinus velutina – Salix gooddingii* Forest and Woodland Alliance	*Populus fremontii – Salix lasiolepis* Association *Populus fremontii – Salix* (*laevigata, lasiolepis, lucida* subsp. *lasiandra*) Association	FACW (willow dominants)
Valley Oak Riparian Forest and Woodland	*Quercus lobata* Riparian Forest and Woodland Alliance	*Quercus lobata – Salix lasiolepis* Association *Quercus lobata – Salix laevigata* Provisional Association	FACW (willow dominants)
Shrubland Alliances			
Arroyo Willow Thickets	*Salix lasiolepis* Shrubland Alliance	*Salix lasiolepis – Salix lucida* Association *Salix lasiolepis* Association	FACW
Mulefat thickets	*Baccharis salicifolia* Shrubland Alliance	*Baccharis salicifolia* Association	FACW
Herbaceous Alliances			
Yerba Mansa – Nuttall's Sunflower – Nevada Goldenrod Alkaline Wet Meadows	*Anemopsis californica – Helianthus nuttallii – Solidago spectabilis* Herbaceous Alliance	*Anemopsis californica* Provisional Association *Solidago (confinis, spectabilis)* Provisional Association	OBL
Salt Grass Flats	*Distichlis spicata* Herbaceous Alliance	*Distichlis spicata – Hordeum murinum* Association	FAC
Ashy Ryegrass-Creeping Ryegrass Turfs	*Leymus cinereus – Leymus triticoides* Herbaceous Alliance	*Leymus triticoides – Bromus* spp. – *Avena* spp. Association	FAC

Table 3. Vegetation Alliances and Associations Mapped within the Survey Area

Alliance Name	Alliance Scientific Name	Association(s)	Wetland Indicator Status for Dominant Species in Alliance[1]
Common Monkey Flower Seeps	*Mimulus* [*guttatus*] Herbaceous Alliance	*Mimulus guttatus* Association	OBL
Baltic and Mexican Rush Marshes	*Juncus arcticus* (var. *balticus, mexicanus*) Herbaceous Alliance	*Juncus arcticus* var. *balticus* Association	FACW
American Bulrush Marsh	*Schoenoplectus americanus* Herbaceous Alliance	*Schoenoplectus americanus* / *Lepidium latifolium* Association	OBL
Perennial Pepperwood Patches	*Lepidium latifolium* - Herbaceous Semi-Natural Alliance	*Lepidium latifolium* Semi-natural Association	FACW
Natural Communities Dominated by Upland Species (FACU or no wetland indicator status)			
Woodland and Forest Alliances			
California Buckeye Groves	*Aesculus californica* Woodland Alliance	*Aesculus californica* Association	None
Canyon Live Oak Forest and Woodland	*Quercus chrysolepis* Forest and Woodland Alliance	*Quercus chrysolepis* Association	None
Blue Oak Woodland and Forest	*Quercus douglasii* Woodland and Forest Alliance	*Quercus douglasii – Aesculus californica* / grass Association *Quercus douglasii – Pinus sabiniana* Association *Quercus douglasii - Quercus lobata* Association *Quercus douglasii / Bromus* spp. – *Daucus pusillus* Association *Quercus douglasii / Eriogonum fasciculatum* / herbaceous Association	None
Valley Oak Woodland and Forest	*Quercus lobata* Woodland and Forest Alliance	*Quercus lobata* / grass Association	None
Mixed Oak Forest and Woodland	*Quercus* [*agrifolia*, *douglasii*, *garryana*, *kelloggii*, *lobata*, *wislizeni*] Forest and Woodland Alliance	Mixed oak – *Aesculus californica* / grass Association	None
Shrubland Alliances			
Scalebroom Scrub	*Lepidospartum squamatum*	*Lepidospartum squamatum* / ephemeral annuals Association	FACU
Cheesebush – Sweetbush Scrub	*Ambrosia salsola – Bebbia juncea* Shrubland Alliance	*Ambrosia salsola* Association	None
heWedge Leaf Ceanothus Chaparral, Buck Brush Chaparral	*Ceanothus cuneatus* Shrubland Alliance	*Ceanothus cuneatus* Association	None

Table 3. Vegetation Alliances and Associations Mapped within the Survey Area

Alliance Name	Alliance Scientific Name	Association(s)	Wetland Indicator Status for Dominant Species in Alliance[1]
Acton's and Virgin River Brittle Brush – Net-veined Goldeneye Scrub	*Encelia* [*actonii, virginensis*] – *Viguiera reticulata* Shrubland Alliance	*Encelia actonii* Association	None
California Joint-fir - Longleaf Joint-fir Scrub	*Ephedra californica* – *Ephedra trifurca* Shrubland Alliance	*Ephedra californica* / annual – perennial herb Association	None
Narrowleaf Goldenbush – Bladderpod Scrub	*Ericameria linearifolia* – *Cleome isomeris* Shrubland Alliance	*Cleome isomeris* Association	None
Rubber Rabbitbrush Scrub	*Ericameria nauseosa* Shrubland Alliance	*Ericameria nauseosa* Association	None
California Buckwheat Scrub	*Eriogonum fasciculatum* Shrubland Alliance	*Eriogonum fasciculatum* Association	None
Tucker Oak Chaparral	*Quercus john-tuckeri* Shrubland Alliance	*Quercus john-tuckeri* Association	None
Tamarisk Thickets	*Tamarix* spp. Semi-Natural Stands	*Tamarix* spp. Association	None
Herbaceous Alliances			
Needle Grass – Melic Grass Grassland	*Nassella* spp. – *Melica* spp. Herbaceous Alliance	*Nassella cernua* Association	None
Wild Oats and Annual Brome Grasslands	*Avena* spp. – *Bromus* spp. Semi-Natural Herbaceous Alliance	*Bromus diandrus* - Mixed herbs Association *Bromus hordeaceus* – *Amsinckia menziesii* – *Hordeum murinum* Association	None
Cheatgrass – Medusahead Grassland	*Bromus tectorum* – *Taeniatherum caput-medusae* Semi-Natural Herbaceous Alliance	*Bromus tectorum* – *Bromus diandrus* Association	None
Red Brome or Mediterranean Grass Grasslands	*Bromus rubens* – *Schismus* [*arabicus, barbatus*] Semi-Natural Herbaceous Alliance	*Bromus rubens* – Mixed herbs Association	None

Notes:
1 Lichvar et al. 2016

Below are brief descriptions of each alliance and any associations within a given alliance that were observed along the GKR Project alignment. Species mentioned in these descriptions were observed in the Project area; these descriptions do not represent associated species for a given vegetation type state-wide.

4.1 Natural Communities Dominated by Plants with Wetland Indicator Status

Fourteen alliances dominated by species with a FAC or FACW wetland indicator status were mapped along the GKR Project alignment; these species are included in the National Wetland Plant List (Lichvar et al. 2016), based on their occurrence in wetland habitats at least some of the time. These vegetation types generally occur in emergent wetlands, flats, meadows and along stream channels – five woodland alliances, two shrubland alliances and/or associations, and seven herbaceous alliances.

4.1.1 Woodland and Forest Vegetation

California Sycamore – Coast Live Oak Riparian Woodlands (*Platanus racemosa* – *Quercus agrifolia* Woodland Alliance)

California Sycamore – Coast Live Oak Riparian Woodlands are dominated by the winter-deciduous California sycamore, also called western sycamore, members of the Sycamore Family (Platanaceae) that can exceed 100 feet (30 meters) in height at maturity. Woodlands dominated by California sycamore occur from Redding south through the mountains and valleys surrounding the Central Valley to the Tehachapi Mountains and from San Francisco south to Baja California in the Coast Ranges, Transverse Ranges, and Peninsular Ranges, mostly below 6,500 feet (2,000 meters) amsl and often below 4,000 feet (1,220 meters). Although the revised name of this alliance includes coast live oak (*Quercus agrifolia*), coast live oak does not occur with California sycamore in this area. Within the GKR alignment, California Sycamore Woodlands are represented by the *Platanus racemosa* – *Salix laevigata / Salix lasiolepis* – *Baccharis salicifolia* Association, which occurs in the Kern River drainage in the southern Sierra Nevada near the terminus of the GKR alignment at the Kern River 1 Hydroelectric Substation.

Goodding's Willow - Red Willow Riparian Woodland and Forest (*Salix gooddingii - Salix laevigata* Woodland and Forest Alliance)

Goodding's Willow - Red Willow Woodland and Forest are dominated by Goodding's willow and red willow, often mixed with other willow and woody species, which form an open to continuous canopy. Red willow is a winter-deciduous tree to 50 feet (15 meters) or more in height, with dark reddish-brown bark with many furrows and interconnecting ridges. It has an irregular open crown at maturity and slender light to dark orange-brown branchlets. Leaves are lance-shaped, with minute teeth or scallops along the margins and a yellow mid-vein, with upper surface darker green and lower surface paler and minutely hairy; this species also has overlapping bud scales, an unusual trait for most willows. Both Goodding's willow and red willow has a wetland indicator status of FACW, meaning that it usually occurs in wetlands (67-99% of the time), but is occasionally found in non-wetlands (Lichvar et al. 2016). Within the GKR alignment, Goodding's Willow - Red Willow Woodland and Forest are represented by the *Salix laevigata* Association and the *Salix laevigata* – *Salix lasiolepis* Association. The *Salix laevigata* Association was observed along the Kern River immediately adjacent to the Kern River 1 Hydroelectric Substation, along Grapevine Creek at Fort Tejon State Historic Park, in a small drainage north of the Gorman Substation, and in the Castac Valley west of Castac Lake. The *Salix laevigata* – *Salix lasiolepis* Association was observed in one stand along Grapevine Creek at Fort Tejon State Historic Park.

Shining Willow Groves (*Salix lucida* Woodland Alliance)

Shining Willow Groves are dominated by shining willow, also called Pacific willow or yellow willow. Shining willow occurs in mixed riparian forests and woodlands within the GKR alignment, occasionally occurring in large enough stands to be mapped as an alliance. Shining willow is a winter-deciduous tree that reaches 60 feet (18 meters) in height or more at maturity, with an unsymmetrical rounded crown and gray to brownish bark that becomes fissured and darkens in age. Leaves are long-pointed and lance-shaped, with shiny green upper surfaces, whitish lower surfaces, and minute teeth along margins that are often tipped with tiny glands; the leaf stalks (petioles) also often bear glands. Like other willows and cottonwoods, male and female flowers are produced on different trees in spring. Shining willow is relatively short-lived, surviving for 40 to 50 years before senescing. Shining willow has a wetland indicator status of FACW, meaning that it usually occurs in wetlands (67-99% of the time), but is occasionally found in non-wetlands (Lichvar et al. 2016). Shining Willow Groves within the GKR alignment include the *Salix lucida* subsp. *lasiandra* Association and the *Salix lucida* subsp. *lasiandra* / *Urtica urens* – *Urtica dioica* Association. The *Salix lucida* subsp. *lasiandra* Association was observed adjacent to Castac Lake and its associated drainage, Crane Canyon Creek. The *Salix lucida* subsp. *lasiandra* / *Urtica urens* – *Urtica dioica* Association was observed in a tributary to Gorman Creek near the Gorman Substation.

Fremont Cottonwood Forest and Woodland (Populus fremontii – Fraxinus velutina – Salix gooddingii Forest and Woodland Alliance)

Fremont Cottonwood Forest and Woodland is dominated by Fremont cottonwood, a tall winter-deciduous tree to 100 feet (30 meters) or more feet in height, with rough fissured grayish bark and a broad crown at maturity. Branchlets are stout and pale green, supporting triangular-shaped coarsely-toothed leaves with a broad base, narrow pointed tip, and shiny green on both surfaces. Two other species are listed as members of this alliance, velvet ash (*Fraxinus velutina*) and Goodding's willow. Goodding's willow occurred in several locations as an associated species. Fremont cottonwood has no wetland indicator status, despite its frequent presence along streams and rivers. However, the two mapped associations of Fremont Cottonwood Forest and Woodland within the GKR alignment support wetland indicator species as codominants, especially arroyo willow, red willow, shining willow, and Goodding's willow, all of which have a wetland indicator status of FACW, meaning that they usually occur in wetlands (67-99% of the time, Lichvar et al. 2016).

Fremont Cottonwood Forest and Woodland occurs along floodplains, rivers, intermittent and perennial streams, as well as near springs and in valleys with a high water table below 6,500 feet (2,000 meter) amsl in much of interior California east to Colorado, south into New Mexico, a few areas in southwestern Texas, and a few locations in northwestern Mexico. This forest community forms an open to continuous canopy with associated shrubs and herbaceous species. Within the GKR alignment, associated species include shining willow (*Salix lucida* subsp. *lasiandra*), red willow, arroyo willow, California blackberry, and non-native grasses and herbs such as broadleaved pepperweed (*Lepidium latifolium*).

Mapped associations of Fremont Cottonwood Forest include the *Populus fremontii – Salix lasiolepis* Association and the *Populus fremontii – Salix* (*laevigata, lasiolepis, lucida* subsp. *lasiandra*) Association. The *Populus fremontii – Salix lasiolepis* Association was observed west of Castac Lake in the Castac Valley in one stand. The *Populus fremontii – Salix* (*laevigata, lasiolepis, lucida* subsp. *lasiandra*) Association was observed in several locations in Grapevine Canyon north of Lebec.

Valley Oak Riparian Forest and Woodland (Quercus lobata Riparian Woodland Alliance)

Valley Oak Riparian Forest and Woodland is dominated by valley oak, an evergreen tree in the Beech Family (Fagaceae). Valley oak occurs in woodlands and savannas in relatively deep soils in moist valley bottoms and on slopes up to 6,000 feet (1,830 meters). Historically, valley oaks were widespread in the Great Central Valley, extending into the Coast Ranges, Sierra Nevada, and Transverse Ranges as well. Valley oak is a large, winter deciduous tree that has a high tolerance of temporary flooding and also tolerates drought if roots reach subterranean moisture. Valley Oak Woodland consists of scattered, large, mature trees growing with amongst willows in the Project area. Soils tend to be alluvial or from original well-weathered rock. Valley oak has a FACU wetland indicator status, meaning it occurs in wetlands 1-33% of the time; all associations within this alignment on the GKR alignment have a FACW wetland indicator status, including arroyo willow and red willow, meaning that they usually occur in wetlands (67-99% of the time, Lichvar et al. 2016). Mapped associations of Valley Oak Riparian Forest and Woodland include the *Quercus lobata* – *Salix lasiolepis* Association and *Quercus lobata* – *Salix laevigata* Provisional Association. The *Quercus lobata* – *Salix lasiolepis* Association occurs in one location near the entrance to Fort Tejon State Historic Park. The *Quercus lobata* – *Salix laevigata* Provisional Association occurs within Fort Tejon State Historic Park along Grapevine Creek.

4.1.2 Shrubland Vegetation

Arroyo Willow Thickets (*Salix lasiolepis* Shrubland Alliance)

Arroyo Willow Thickets are dominated by arroyo willow, a large shrub to small tree in the Willow Family (Salicaceae) that can reach 30 feet (10 meters) or more feet in height under favorable conditions. Shrublands dominated by arroyo willow occur primarily on the banks and benches of streams and rivers, as well as seeps along slopes and ephemeral drainages below 7,200 feet (2,170 meters) amsl if sufficient moisture is present at depth. It can be found throughout California and extends north to British Columbia and east from the western half of Idaho south to Texas and into Mexico. Arroyo Willow has a wetland indicator status of FACW (Lichvar et al. 2016). Within the GKR alignment, Arroyo Willow Thickets are represented by the *Salix lasiolepis* Association and the *Salix lasiolepis* – *Salix lucida* Association. The *Salix lasiolepis* Association was observed in two general locations: near the Kern River 1 Hydroelectric Substation along the Kern River margins and in south-facing drainages below the crest of the southern Tehachapi Mountains in tributaries to Gorman Creek immediately north of the Gorman Substation. The *Salix lasiolepis* – *Salix lucida* Association was observed in one general location along Grapevine Creek between Fort Tejon State Historic Park and Lebec.

Mulefat Thickets (*Baccharis salicifolia* Shrubland Alliance)

Mulefat Thickets are dominated by mulefat, a shrub in the Sunflower Family (Asteraceae). Thickets dominated by mulefat occur in canyon bottoms, floodplains, irrigation ditches, lake margins, and stream channels up to 4,100 feet (1,250 meters) amsl with distribution across California, Arizona, Texas and Mexico.

this species has a wetland indicator status of FACW (Lichvar et. al 2016), meaning that it is a plant that is equally likely to occur in wetlands and non-wetlands (34-66 percent of the time, Lichvar et al. 2016).

Within the GKR alignment, Mulefat Thickets are represented by the *Baccharis salicifolia* Association, which occurred in four drainages within the alignment: along El Paso Creek in the San Joaquin Valley south of Comanche Point; just southeast of Grapevine in a wash; in a drainage on the west side of Grapevine Mountain above Grapevine Canyon; and in a seasonally-moist location near a tributary to Gorman Creek.

4.1.3 Herbaceous Vegetation

Yerba Mansa – Nuttall's Sunflower – Nevada Goldenrod Alkaline Wet Meadows (*Anemopsis californica* – *Helianthus nuttallii* – *Solidago spectabilis* Herbaceous Alliance)

Yerba Mansa – Nuttall's Sunflower – Nevada Goldenrod Alkaline Wet Meadows are dominated by three native herbaceous perennials: yerba mansa, Nuttall's sunflower, and Nevada goldenrod, also called showy goldenrod. Yerba Mansa – Nuttall's Sunflower – Nevada Goldenrod Alkaline Wet Meadows occur in California in the southern portion of the state, extending from the Mono Lake area south to Little Lake; from the Fresno region south in the Great Central Valley; from Ventura County to San Diego County along Coastal California; and from Death Valley south into San Bernardino County (http://vegetation.cnps.org/alliance/319). It also can be found in other western states, north to Oregon and east to Kansas and south to New Mexico and western Texas, as well as in northwest Mexico. Nuttall's sunflower was not observed within the GKR alignment. Nevada goldenrod was not observed within the GKR alignment, but southern goldenrod (*Solidago confinis*) was observed. Yerba mansa and southern goldenrod both have a wetland indicator status of obligate (OBL), meaning that they always occur in wetlands (Lichvar et al. 2016). Within the GKR alignment, Yerba Mansa – Nuttall's Sunflower – Nevada Goldenrod Alkaline Wet Meadows is represented by the *Anemopsis californica* Provisional Association and the *Solidago (confinis, spectabilis)* Provisional Association. These associations were observed in seeps near the Gorman Substation, where yerba mansa, southern goldenrod, slender sedge, cottonbatting plant, and alkali rye predominated.

Salt Grass Flats (*Distichlis spicata* Herbaceous Alliance)

Salt Grass Flats are dominated by saltgrass, a mat-forming perennial rhizomatous grass in the Grass Family (Poaceae). Habitats dominated by Salt Grass Flats occur along the intermittently-flooded margins of streams, rivers, lakes, ponds, sloughs and adjacent meadows and upland areas that are seasonally dry between 0 and 5,000 feet (0 and 1,500 meters) amsl throughout much of California where suitable habitat and moisture is present, extending across North America and south into South America. Saltgrass has a wetland indicator status of Facultative (FAC), a facultative species that is equally likely to occur in wetlands as in non-wetlands (Lichvar et al. 2016). Within the GKR alignment, Saltgrass Flats are represented by the *Distichlis spicata* – *Hordeum murinum* Association one general location along Grapevine Creek in the Castac Valley between Fort Tejon State Historic Park and Lebec.

Baltic and Mexican Rush Marshes (*Juncus arcticus* [var. *balticus, mexicanus*] Herbaceous Alliance)

Baltic and Mexican Rush Marshes are dominated by two closely related perennial species of rush, Baltic rush and Mexican rush; these species are also called wire rush and are in the Rush Family (Juncaceae). Taxonomists differ in their treatment of this widespread group, and we follow the Jepson Manual in this report, but others consider Baltic rush and Mexican rush to be varieties of Arctic rush, as the name of this vegetation type implies (Sawyer et al. 2009, Flora of North America 2000, USDA 2019). Wetland habitats dominated by Baltic and Mexican Rush Marshes occur along streams, rivers, lakes, ponds, sloughs and adjacent meadows and upland areas that are seasonally dry between sea level and 7,200 feet (2,200 meters) amsl throughout much of California where suitable habitat and moisture is present, extending across North America and into Eurasia. Baltic and Mexican rush have a wetland indicator status of FACW, meaning that they usually occur in wetlands (67-99 percent of the time), but are occasionally found in non-wetlands (Lichvar et al. 2016). Within the GKR alignment, Baltic and Mexican Rush Marshes are represented by the *Juncus arcticus* var. *balticus* Association. The *Juncus arcticus* var. *balticus* Association was observed in moist soils on either side of Chanac Creek in the Cummings Valley just east of the Horse Thief Country Club in Stallion Springs and in seasonally inundated soils between Fort Tejon State Historic Park and Castac Lake in Castac Valley.

Ashy Ryegrass - Creeping Ryegrass Turfs (*Leymus cinereus – Leymus triticoides* Herbaceous Alliance)

Ashy Ryegrass – Creeping Ryegrass Turfs is dominated by ashy ryegrass, also known as Great Basin wild rye (*Leymus cinereus*), a tufted perennial grass in the Grass Family (Poaceae) that is also known as *Elymus cinereus*; and creeping ryegrass, also called alkali-rye, a rhizomatous perennial grass in the Grass Family (Poaceae) that is also classified as *Elymus triticoides*. Only creeping ryegrass was observed in this alliance within the GKR alignment. Herbaceous vegetation dominated by ashy ryegrass and creeping ryegrass occurs in a variety of mesic and wet habitats including playas, intermittent washes, valley bottoms and on the margins of marshes, floodplains, drainages below 9,800 feet (3,000 meters) amsl throughout much of California. Creeping ryegrass also extends north to British Columbia and east to Texas in appropriate habitats. Ashy ryegrass and creeping ryegrass have a wetland indicator status of FAC, a facultative species that is equally likely to occur in wetlands as in non-wetlands (Lichvar et al. 2016). One association of Ashy Ryegrass - Creeping Ryegrass Turfs occurs within the GKR alignment, the Leymus triticoides – Bromus spp. – Avena spp. Association. The Leymus triticoides – Bromus spp. – Avena spp. Association was observed in two locations, one near the Gorman Substation and the other in moist soils to the west-northwest of Castac Lake.

Common Monkey Flower Seeps (*Mimulus* [*guttatus*] Herbaceous Alliance)

Common Monkey Flower Seeps are dominated by common monkeyflower, a rhizomatous herbaceous perennial in the Lopseed Family (Phrymaceae) that is now classified as *Erythranthe guttata*. Common monkeyflower occurs in many parts of California below 8,200 feet (2,500 meters) amsl, often at the margins of saturated, vernally moist streams, seeps, and meadows. Outside of California, common monkeyflower occurs in all states west of the Rocky Mountains, as well as isolated locations to the east. Common monkeyflower has a wetland indicator status of OBL, meaning that it always occurs in wetlands

(Lichvar et al. 2016). Common Monkey Flower Seeps are represented by the *Mimulus guttatus* Association within the GKR alignment in two nearby locations in a tributary to Gorman Creek near the Gorman Substation.

American Bulrush Marsh (*Schoenoplectus americanus* Herbaceous Alliance)

American Bulrush Marsh is dominated by American bulrush, a perennial rhizomatous herb in the Sedge Family (Cyperaceae); marsh vegetation dominated by American bulrush occurs at the edges of streams, ponds, and lakes and within sloughs, swamps, marshes (fresh and brackish), and man-made ditches below 7,200 feet (2,200 meters) above amsl. American bulrush occurs in the Great Central Valley and in wetlands and marshes across California, as well as throughout much of the United States, British Columbia, Nova Scotia, south through Mexico into South America. American bulrush has a wetland indicator status of OBL, meaning that it always occurs in wetlands (Lichvar et al. 2016). American Bulrush Marsh is represented by the *Schoenoplectus americanus* / *Lepidium latifolium* Association in one location within the GKR alignment adjacent to Goodding's Willow - Red Willow Riparian Woodlands to the northwest of a retention basin associated with Grapevine Creek north of Fort Tejon State Historic Park.

Perennial Pepperweed Patches (*Lepidium latifolium* Herbaceous Semi-Natural Alliance)

Perennial Pepperweed Patches are dominated by perennial pepperweed, a highly invasive herbaceous perennial in the Mustard Family (Brassicaceae). Herbaceous vegetation dominated by perennial pepper weed occur primarily in riparian corridors and marshes that are seasonally flooded occurring below 6,250 feet (1,900 meters) amsl throughout California, with the exception of most of the Mojave and Sonoran Deserts. Perennial pepperweed has a wetland indicator status of FACW (Lichvar et al. 2016). Within the GKR alignment, Perennial Pepperweed Patches are represented by the *Lepidium latifolium* Semi-Natural Association and was observed in Grapevine Canyon in several places and west of Castac Lake.

4.1.4 Upland Communities

Nineteen vegetation alliances are dominated by upland species. These vegetation types can be found on mountain slopes, alluvial fans, and washes, as well as upland areas in valleys and basins.

4.2 Woodland and Forest Vegetation

California Buckeye Groves (*Aesculus californica* Woodland Alliance)

California Buckeye Groves are dominated by California buckeye, also called California horse-chestnut, a large drought-deciduous tree in the Soapberry Family (Sapindaceae); woodlands dominated by California buckeye occur primarily on well-drained slopes and in canyons and drainages below 5,600 feet (1,700 meters) amsl (above mean sea level). Similar to the distribution of blue oak, California buckeye occurs in a band surrounding the Great Central Valley from Siskiyou County south to Los Angeles County, and also occurs coastal mountain ranges, including the Coast Ranges, Sierra Nevada, Tehachapi Mountains, and isolated locations in the Transverse Ranges.

Canyon Live Oak Forest and Woodland (*Quercus chrysolepis* Forest and Woodland Alliance)

Canyon Live Oak Forest and Woodland is dominated by canyon live oak, an evergreen tree with distinctive golden hairs on the underside of the leaves and on the acorn cap in the Beech Family (Fagaceae); it is also called goldcup oak. Forests dominated by canyon live oak occur primarily in rocky, infertile soils on upland slopes, as well as near streams and in canyon bottoms at elevations ranging from 1,500 to 6,600 feet (450 – 2,000 meter) amsl throughout the California coast ranges and Sierra Nevada.

Blue Oak Woodland and Forest (*Quercus douglasii* Woodland and Forest Alliance)

Blue Oak Woodland and Forest is dominated by blue oak, a tall winter-deciduous tree in the Beech Family (Fagaceae); woodlands dominated by blue oak occur primarily on rock outcrops, mountain foothills, and sometimes on valley bottoms from 100 to 3,000 feet (30 – 1,900 meters) amsl in the inner Coast Ranges and western slopes of the Sierra Nevada, as well as in some locations in the Klamath Mountains, Cascade Range, and Transverse Ranges. Its occurrence in a near-continuous band on foothills surrounding the Great Valley has led to calling blue oak a “foothill woodland” indicator species.

Valley Oak Woodland and Forest (*Quercus lobata* Woodland and Forest Alliance)

Valley Oak Woodland is dominated by valley oak, an evergreen tree in the Beech Family (Fagaceae). Valley oak occurs in woodlands and savannas in relatively deep soils in moist valley bottoms and on slopes up to 6,000 feet (1,830 meters). Historically, valley oaks were widespread in the Great Central Valley, extending into the Coast Ranges, Sierra Nevada, and Transverse Ranges as well.

Mixed Oak Forest and Woodland (*Quercus* [*agrifolia*, *douglasii*, *garryana*, *kelloggii*, *lobata*, *wislizeni*] Forest and Woodland Alliance)

Within the GKR alignment, there are four oak-dominated alliances, three of which are dominated primarily by one species of oak: Canyon Live Oak Forest, Blue Oak Woodland, and Valley Oak Woodland. All three species, along with California buckeye, form a mixed woodland on the north-facing slopes of the San Emigdeo Range north of Fort Tejon State Historic Park above 3,000 feet (914 meters) amsl. Associated species consist of scattered shrubs and as well as grass and forb species, especially ripgut brome and soft chess (*Bromus hordeaceus*). This association within the GKR alignment Mixed Oak Forest is classified as the mixed oak – *Aesculus californica* / grass Association.

4.2.1 Shrubland Vegetation

Scalebroom Scrub (*Lepidospartum squamatum* Shrubland Alliance)

Scalebroom Scrub is dominated by scalebroom, a largely leafless shrub in the Sunflower Family (Asteraceae). Shrublands dominated by scale-broom occur primarily on intermittently flooded, low-gradient alluvial deposits along streams, washes, and fans from 165 to 5,000 feet (50 – 1,500 meters) amsl in many arid and often rocky washes extending from the inner Coast Ranges in Alameda County, south through the Coast Ranges of central California, the Transverse and Peninsular Ranges, the

southern half of the Great Central Valley, the southern Sierra Nevada, the Mojave Desert, Sonoran Desert, and isolated additional locations; it also occurs in Baja California.

Cheesebush - Sweetbush Scrub (*Ambrosia salsola* – *Bebbia juncea* Shrubland Alliance)

Cheesebush - Sweetbush Scrub is dominated by cheesebush and sweetbush, shrubs in the Sunflower Family (Asteraceae). Shrublands dominated by cheesebush and sweetbush occur primarily in valleys, flats, arroyos, intermittent channels, and washes to 5,200 feet (1,600 meters) amsl. Cheesebush - Sweetbush Scrub is especially widespread in the Mojave and Sonoran Deserts and adjacent mountain ranges. It also occurs in the washes surrounding the southern end of the Great Central Valley, draining the interior Coast Ranges from the Carrizo Plain and Temblor Range south to the north-facing washes of the San Emigdeo Mountains; it also occurs in the southwestern Great Basin Desert.

Wedge Leaf Ceanothus Chaparral, Buck Brush Chaparral (*Ceanothus cuneatus* Shrubland Alliance)

Wedge-leaf Ceanothus/Buckbrush Chaparral is dominated by wedge-leaved ceanothus, also called buckbrush, a tall late-winter to spring-blooming evergreen erect shrub in the Buckthorn Family (Rhamnaceae). Shrublands dominated by wedge-leaved ceanothus occur primarily along ridges and upper slopes from 50 to 7,000 feet (15 – 2,133 meters) amsl along the entire California coast, the Coast Ranges, the Southern Cascades, and the Klamath Mountains north into Oregon to the Washington border.

Acton's and Virgin River Brittle Brush – Net-veined Goldeneye Scrub (*Encelia* [*actonii, virginensis*] ‑ *Viguiera reticulata* Shrubland Alliance)

Acton's and Virgin River Brittle Brush - Net-veined Goldeneye Scrub is dominated by Acton's and Virgin River brittle bush, two species of drought-deciduous shrubs in the Sunflower Family (Asteraceae) and by net-veined goldeneye, a shrub in the Sunflower Family (Asteraceae) also classified as *Bahiopsis reticulata* (Baldwin et al. 2009). Acton's encelia has a broad distribution on rocky slopes in the southern and eastern Sierra Nevada, in the Transverse and Peninsular Ranges of southern California, and in desert mountain ranges from 980 to 6,200 feet (300 – 1,900 meters) amsl. Virgin River encelia occurs primarily in the eastern Mojave Desert through desert mountains to southwest Utah, southwestern New Mexico, and Baja California. Net-veined goldeneye does not occur in the Project area; it occurs in Inyo and northern San Bernardino Counties into western Nevada. Only the Acton’s encelia Association of this alliance occurred in the Project area.

California Joint-fir - Longleaf Joint-fir Scrub (*Ephedra californica* – *Ephedra trifurca* Shrubland Alliance)

California Joint-fir - Longleaf Joint-fir Scrub is dominated by California joint-fir and/or longleaf joint-fir, dioecious shrubs in the Ephedra Family (Ephedraceae); species of *Ephedra* in western North America are also known as Mormon-tea. Shrublands dominated by California joint-fir and longleaf joint-fir occur primarily on intermittently flooded arroyos, washes, and adjacent to alluvial fans or residual dunes and xeric fine-grained sedimentary substrates from 650 to 4,000 feet (200 to 1,200 meters) amsl in the

southern end of the San Joaquin Valley; the inner Coast, Transverse, and Peninsular Ranges of central and southern California; the Mojave and Sonoran Deserts; and a few outlying locations.

Narrowleaf Goldenbush – Bladderpod Scrub (*Ericameria linearifolia – Cleome isomeris* Shrubland Alliance)

Narrowleaf Goldenbush – Bladderpod Scrub is dominated by two rounded shrubs, narrowleaf goldenbush in the Sunflower Family (Asteraceae) and bladderpod in the Spiderflower Family (Cleomaceae). Shrublands dominated by narrowleaf goldenbush and bladderpod occur primarily on dry slopes and ridges with shallow, often well-drained soils between 330 and 6,560 feet (100 and 2,000 meters) amsl in the inner Coast Ranges, southern Sierra Nevada, Tehachapi Mountains, and the upper Mojave Desert.

Rubber Rabbitbrush Scrub (*Ericameria nauseosa* Shrubland Alliance)

Rubber Rabbitbrush Scrub is dominated by rubber rabbitbrush, a shrub in the Sunflower Family (Asteraceae). Shrublands dominated by rubber rabbitbrush occur throughout the Intermountain West and arid Great Plains, from California north into Canada, east to North Dakota, and south into northwest Mexico, with 21 name varieties, often associated with mountainous areas up to 10,498 feet (3,200 meters) amsl.

California Buckwheat Scrub (*Eriogonum fasciculatum* Shrubland Alliance)

California Buckwheat Scrub is dominated by California buckwheat, a shrub in the Buckwheat Family (Polygonaceae). California buckwheat has a widespread distribution in the southern half of California, with several named subspecies. California buckwheat occurs in a variety of habitats, including creosote bush scrub, sagebrush scrub, pinyon juniper woodland, coastal sage scrub, and is common on well-drained slopes and in ephemeral drainages or more permanent drainages at the rocky upland margins below 8,200 feet (2,500 meters) amsl throughout the Coast Ranges extending from Trinity County south to Mexico; the Sierra Nevada and desert mountain ranges; the Transverse and Peninsular Ranges; the Sonoran, Mojave, and southern Great Basin Deserts; and arid or semi-arid locations in valleys throughout this region. In locations where California buckwheat is a dominant plant (> 50% relative cover, or important component of a shrub mix), the vegetation may be called California Buckwheat Scrub.

Tucker Oak Chaparral (*Quercus john-tuckeri* Shrubland Alliance)

Tucker Oak Chaparral is dominated by Tucker oak, a shrub in the Oak Family (Fagaceae). Shrublands dominated by Tucker oak occur primarily on slopes and ridges at elevations between 3,000 and 6,800 feet (900 – 2,090 meters) amsl in the Coast and Transverse Ranges of central and southern California, including the Tehachapi Mountains and San Emigdio and Temblor Ranges.

Tamarisk Thickets (*Tamarix* spp. Semi-Natural Stands)

Tamarisk Thickets are dominated by tamarisk, a genus that includes highly invasive shrubs and trees in the Tamarisk Family (Tamaricaceae). Vegetation dominated by tamarisk occur primarily on arroyo and lake margins, ditches, washes, and rivers from 240 to 2,600 feet (75 – 800 meters) amsl throughout California.

4.2.2 Herbaceous Vegetation

Needle Grass – Melic Grass Grassland (*Nassella* spp. – *Melica* spp. Herbaceous Alliance)

Needle Grass – Melic Grass Grassland is dominated by two genera of tufted perennial native grasses, needlegrass in the genus *Nassella*, now called *Stipa*, and melic grass in the genus *Melica*. Nodding needlegrass (*Stipa* [*Nassella*] *cernua*) forms an association in Needle Grass – Melic Grass Grassland within the GKR alignment; no grasslands are dominated by melic grass. Native grasslands dominated by needlegrass occur in upland locations in many parts of cismontane California below 5,600 feet (1,700 meters), especially in deep soils with low woody cover; nodding needlegrass is restricted to California and Baja California. Nodding needlegrass is a tufted perennial bunchgrass with elongate arched inflorescences up to 3 feet (0.9 meters) in length. Although individual spikelets are one-flowered, there are many spikelets per inflorescence. The spindle-shaped spikelets are topped with a twice-bent awn approximately 2.5 to 4 inches (5 to 10 centimeters) in length that is wavy at the tip..

Wild Oats and Annual Brome Grasslands (*Avena* spp. – *Bromus* spp. Semi-Natural Herbaceous Alliance)

Wild Oats and Annual Brome Grasslands are dominated by annual species of oats and bromes in the Grass Family (Poaceae). Wild Oats and Annual Brome Grasslands occur in full sun below 7,200 feet (1,200 meters) amsl in a variety of topographic conditions in foothills, rangelands, disturbed areas and opening in woodlands and savannas, generally where native vegetation has been previously removed and replaced with non-native grasses.

Red Brome or Mediterranean Grass Grasslands (*Bromus rubens – Schismus* [*arabicus, barbatus*] Semi-Natural Herbaceous Alliance)

Red Brome or Mediterranean Grass Grasslands are dominated by red brome and Mediterranean grass in the Grass Family (Poaceae); grasslands dominated by red brome and Mediterranean grass are widespread below 7,000 feet (2,100 meters) amsl in arid areas of California, with distribution extending east to Texas and south into Mexico. Both red brome and Mediterranean grass are annuals that often exhibit high cover in open, disturbed areas, along with a range of other native and non-native herbaceous species. They can quickly outcompete native annuals and short-lived perennials throughout their range.

Cheatgrass – Medusahead Grassland (*Bromus tectorum – Taeniatherum caput-medusae* Semi-Natural Herbaceous Alliance)

Cheatgrass - Medusahead Grassland in the Proposed Project area is dominated by cheatgrass, an annual grass in the Grass Family (Poaceae). Grassland vegetation dominated by cheatgrass occurs throughout the Intermountain West, including northeastern California, portions of the Owens Valley, and desert areas, mostly below 7,200 feet (2,200 meters) amsl. No medusahead grass was observed within the GKR alignment.

5 REGULATORY BACKGROUND

5.1 Executive Order 11990 (May 24, 1977) Protection of Wetlands

This federal Executive Order establishes a national policy “to avoid the long- and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practical alternative.”

5.2 United States Army Corps of Engineers

Pursuant to Section 404 of the CWA, the USACE regulates the discharge of dredged and/or fill material into Waters of the United States (Waters of the U.S.). The term "Waters of the United States" is defined in 33 Code of Federal Regulations (CFR) Part 328 and includes (1) all navigable waters (including all waters subject to the ebb and flow of the tide), (2) all interstate waters and wetlands, (3) all impoundments of waters mentioned above, (4) all tributaries to waters mentioned above, (5) the territorial seas, and (6) all wetlands adjacent to waters mentioned above. Wetlands are defined in 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions."

The USACE will assert jurisdiction over traditional navigable waters (TNW), all wetlands adjacent to TNW, non-navigable tributaries of TNW that are relatively permanent waters (RPW) (tributaries that typically flow year-round or have continuous flow at least seasonally), wetlands that directly abut such tributaries, and non-RPWs if the water body is determined to have a significant nexus with a TNW.

5.3 Regional Water Quality Control Board

Dredge and fill activities in Waters of the U.S. that trigger coverage under Section 404 of the CWA must also receive water quality certification under Section 401 of the CWA. The State Water Resources Control Board (SWRCB), through its RWQCBs, has jurisdiction over Section 401 water quality certification in California. Under CWA Section 401, the RWQCB must certify that a permit issued under CWA Section 404 meets the water quality objectives of the State of California.

The Porter-Cologne Water Quality Control Act (Porter-Cologne), Division 7 of the California Water Code, establishes the responsibilities and authorities of the nine RWQCBs and the SWRCB.

This act establishes that the “Waters of the State” shall be protected for use and enjoyment by the people of the State and that activities and factors that may affect the quality of the Waters of the State shall be regulated to attain the highest water quality. “Waters of the State” are defined as any surface water or groundwater, including saline waters, within the boundaries of the state. Porter-Cologne also names the RWQCBs to formulate and adopt water quality control plans for all areas within the region.

On April 2, 2019, the California State Water Resources Control Board adopted the “State Wetland Definition and Procedures for Discharges for Dredged or Fill Material to Waters of the State.” The rule clarifies what is considered a wetland for the entire state and establishes permitting procedures for discharged materials from or to areas considered a wetland. The rule also provides consistency in the way the State Water Board and nine regional water boards regulate activities to protect wetlands and

other waterways, such as rivers and streams, and bays and estuaries. The rule became effective in May 2020.

5.4 California Department of Fish and Wildlife

Pursuant to Section 1600-1617 of the Fish and Game Code, CDFW may require a Lake or Streambed Alteration Agreement prior to any activity that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of a river, stream, or lake, or use material from a streambed.

CDFW defines a stream (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." CDFW's definition of a lake includes natural lakes or man-made reservoirs. In addition to the bed and banks of a stream, CDFW authority includes riparian or wetland vegetation associated with a stream.

6 METHODOLOGY

A jurisdictional delineation of Waters of the U.S., including wetlands, and waters of the State was conducted for the Project area from March 13 to March 31, 2017 and between April 15 and 16, 2019. The field delineations were conducted by qualified biologists, consisting of one team of two. For the purposes of the delineation, the Project area consisted of a survey buffer extending 75 feet from either side of the alignment centerline and a circle with a 100-foot radius around each existing tower.

The delineation teams walked the Project alignment and collected data on all state and federal jurisdictional features. At each drainage feature, average channel width and depth were estimated in the field in accordance with the descriptions below and features such as substrate type and topography were recorded. Once the outer jurisdictional limits were identified in the field, the boundary of the feature was walked with a Trimble GeoXH Geoexplorer 2008 handheld GPS unit set to collect positional data. Photographs were taken to document site conditions. When field data collection was complete, jurisdictional boundaries were downloaded from the Trimble GPS unit and converted into a GIS GeoDatabase using ArcGIS software. Properties such as length, width, and acreage of the drainage were calculated through ArcGIS.

Paleo channels (features that may have once conveyed water but lacking recent indications of water flow) and remnants of inactive stream channels that do not exhibit evidence of modern water flow were determined to be non-jurisdictional due to the lack of bed and bank or indicators of ordinary high water mark (OHWM).

6.1 Delineation of Wetland Water of the U.S.

The wetland field delineation methodology followed the routine onsite determination method described in the Corps of Engineers Wetland Delineation Manual (USACE 1987), as well as regional approaches identified in the Final Regional Supplement to the Corps of Engineers Wetland Delineation Manual Arid West Region (Version 2.0) (USACE 2010). Some wetlands were inaccessible due to flooded conditions

and hydric soils were assumed for features that were inundated during the time of the survey. Field data forms were completed and are included in Attachment D.

6.2 Delineation of Non-Wetland Waters of the U.S. (USACE and RWQCB Jurisdiction)

The boundaries of non-tidal, non-wetland water features were delineated at the OHWM as defined in 33 CFR 328.3 and in accordance with *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States, A Delineation Manual* (USACE 2008).

Field data forms for determining the OHWM were completed for representative drainages with multiple low flow channels and not at all of the smaller single-channel drainage features. Features with an OHWM were considered jurisdictional non-wetland waters of the U.S. pursuant to the CWA, regulated by the USACE, unless the features were isolated and not within USACE jurisdiction. Field data forms were completed for representative non-wetland features and are included in Attachment D. USACE jurisdictional waters mapping is shown in Attachment E and CDFW jurisdictional waters mapping is provided in Attachment F. A photographic log is presented in Attachment G.

6.3 Delineation of CDFW Jurisdiction

The boundaries of waters subject to regulation by the CDFW were delineated using agency-issued guidance under the California Fish and Game Code, related CDFW materials, and standard practices by CDFW personnel and wetland delineation professionals. CDFW jurisdiction was delineated by measuring the outer boundaries of the greater of either the top of bank measurement (bankfull width) or the extent of associated riparian or wetland vegetation.

7 RESULTS

7.1 Wetlands

A total of 43.90 acres (1,912,284 square feet) of potentially jurisdictional wetlands were delineated within the Project area. Delineated wetlands met the three mandatory criteria (hydric soils, hydrology, and dominance of hydrophytic vegetation). If a dominance of hydrophytic vegetation and hydrology were present, hydric soils were assumed to be present. Details on the types of wetland vegetation observed within the alignment and corresponding alliances are provided in Section 4.1. Mapping for the jurisdictional wetlands is provided in Attachment E. Representative photos of the drainages within the Project area are presented in Attachment G. A summary of jurisdiction, area, and linear feet by individual feature is provided as Attachment H.

7.2 Non-wetlands

Within the Project survey area, approximately 6.8 acres and approximately 296,208 square feet of potentially jurisdictional non-wetland waters subject to the jurisdiction of the USACE and RWQCB were identified. The drainages totaled 23,407 linear feet.

Mapping for the USACE and RWQCB jurisdictional drainages are provided in Attachment E, and mapping for CDFW jurisdiction is provided in Attachment F. Representative photos of the drainages within the Project area are presented in Attachment G. A summary of jurisdiction, area, and linear feet by individual feature is provided as Attachment H.

7.3 Clean Water Act Sections 404 and 401

The Project wetlands meet the criteria for jurisdictional waters (hydrology, vegetation, and soils) and appear to have hydrological connections to traditional navigable waters such as the Kern River. Therefore, the wetland waters in the Project area are considered jurisdictional under the USACE and RWQCB pursuant to the CWA Sections 404 and 401.

The drainages are unnamed ephemeral non-Relatively Permanent Waters (RPWs). Ephemeral drainages within the study area exhibit channel morphology and OHWM indicators such as bank, scour, and sediment deposits with only riverine hydrological indicators. The majority of the drainages traverse upland Mojave Desert habitats and exhibit a lack of vegetation or occurrence of upland desert vegetation within the channels. While reviewing the study area prior to the field survey using existing mapping and aerial photography, many potential features seemed to be present or seem to extend farther than currently mapped; however, during the field surveys, these features were evaluated closely (when present) and do not meet the standards for jurisdiction and/or do end abruptly.

The USACE has not made previous jurisdictional determinations on non-wetland waters in the Project area. Project drainages have been defined as non-wetland waters under the jurisdiction of USACE and RWQCB pursuant to the CWA (Attachment G). A summary of jurisdiction, area, and linear feet by individual feature is provided as Attachment H.

All conclusions regarding potential jurisdiction in this report reflect the opinions of the professionals conducting the field surveys and preparing the reports. Only the state and federal agencies have the authority to formally assert jurisdiction and to determine the limits of their jurisdiction.

7.4 California Fish and Game Code 1602

All drainages within the Project area with a channel defined by bed and bank, are considered streambeds potentially subject to CDFW per Section 1602 of the California Fish and Game Code. There are 18.1 acres (788,436 square feet) and 23,407 linear feet of CDFW jurisdictional streams within the GKR project area. The drainages within the study area are summarized in the tables in Attachment H. Mapping for CDFW jurisdiction is provided in Attachment F.

8 CONCLUSION

Within the Project alignment, there are approximately 43.9 acres (1,912,284 square feet) of wetlands and 6.8 acres (296,208 square feet) of other waters under CWA jurisdiction 404 and 401. Approximately 18.1 acres (788,436 square feet) of features under CDFW 1602 jurisdiction were identified within the Project alignment. Table 4 summarizes the area of jurisdiction within the Project alignment. Implementation of the Project may require permits and authorizations from USACE, RWQCB, or CDFW depending on the potential for temporary or permanent impacts on jurisdictional features.

Table 4. CWA 404 and 401 and CDFW 1602 Results

Jurisdiction	Acres	Square Feet	Linear Feet
CWA 404/401 Wetlands	43.9	1,912,284	--
CWA 404/401 Other Waters	6.8	296,208	23,407
CDFW 1602	18.1	788,436	23,407

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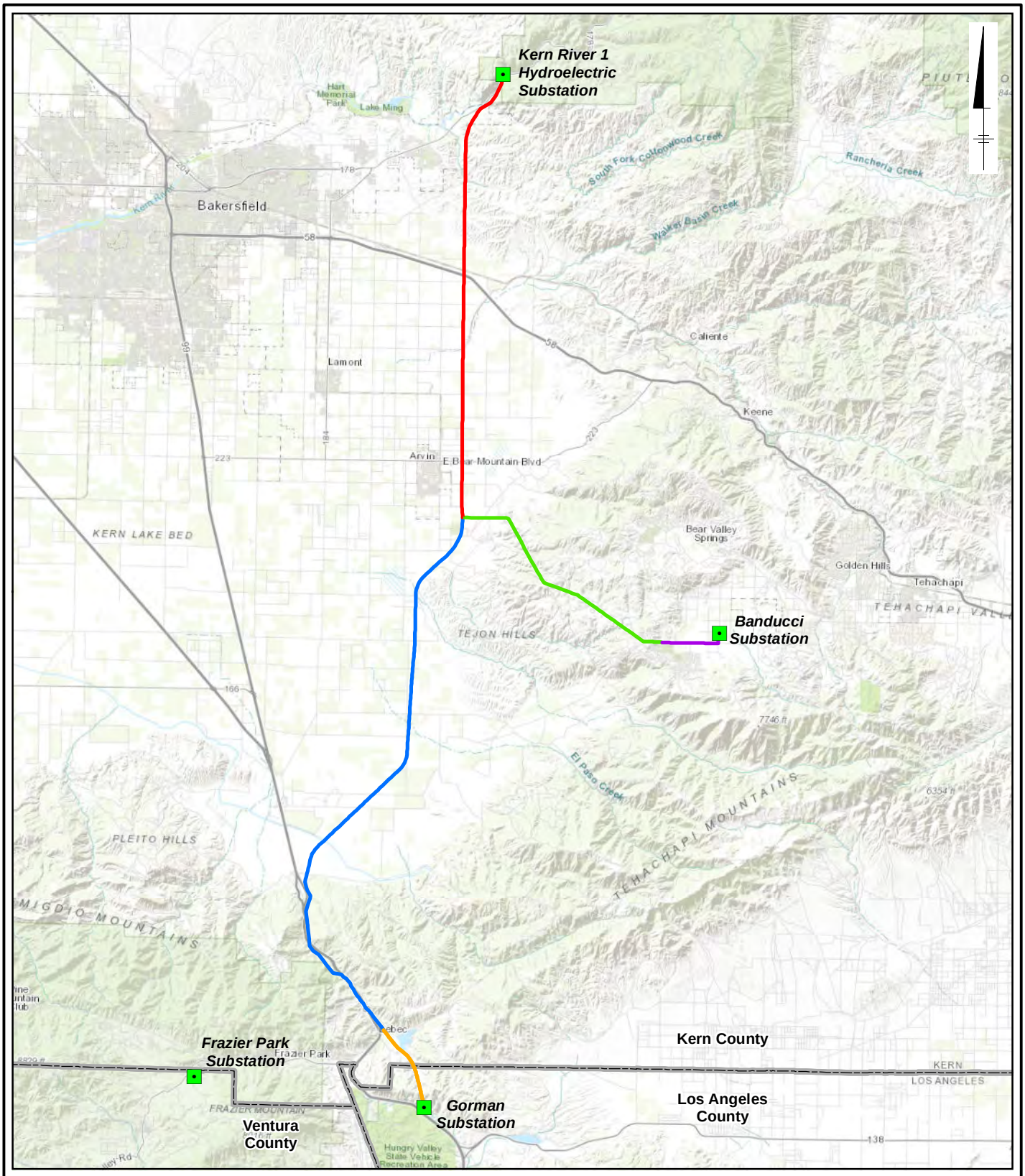
ATTACHMENT A

Project Location Map



Legend

- Segment 1
- Segment 2
- Segment 3
- Segment 4
- Segment 5
- Substation
- Counties

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GORMAN-KERN RIVER 66 kV PROJECT

ALIGNMENT OVERVIEW

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Attachment A

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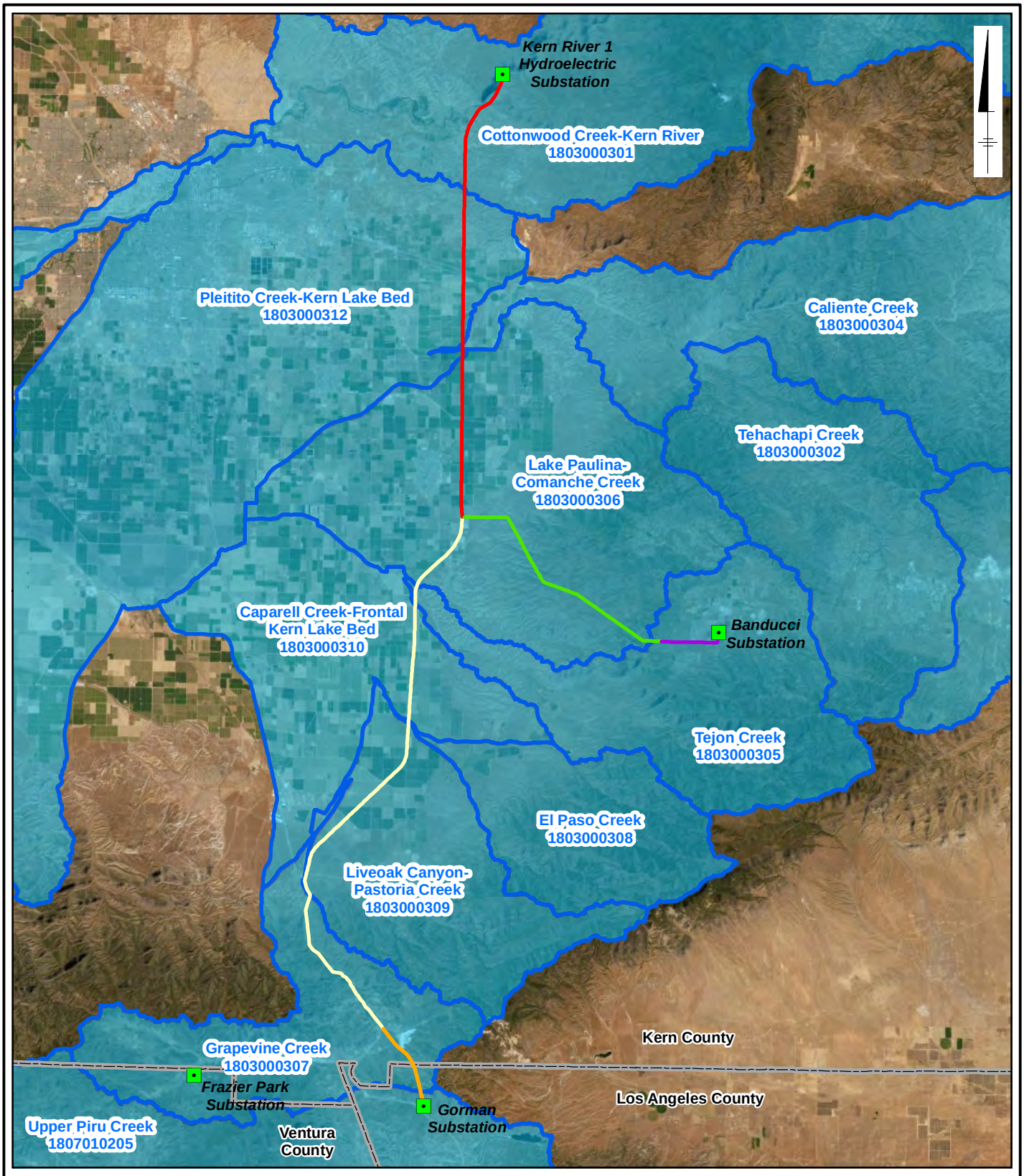
ATTACHMENT B

Hydrology Map



Legend

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- Hydrologic Units (HUC10)

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GORMAN-KERN RIVER 66 kV PROJECT

HYDROLOGIC UNITS

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Attachment **B**

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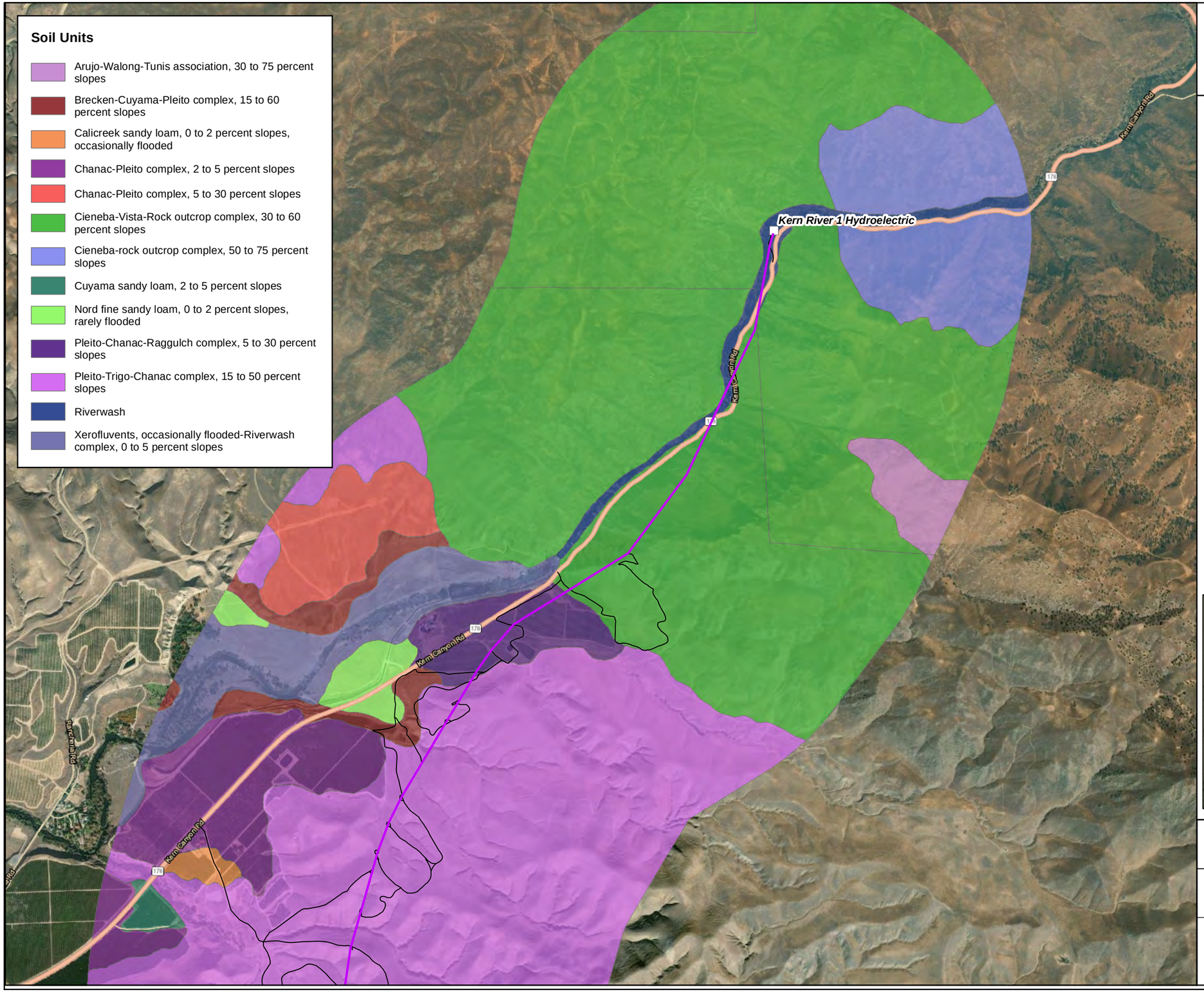
ATTACHMENT C

Soils Map



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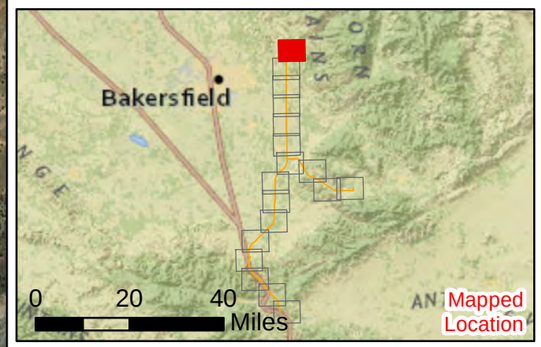

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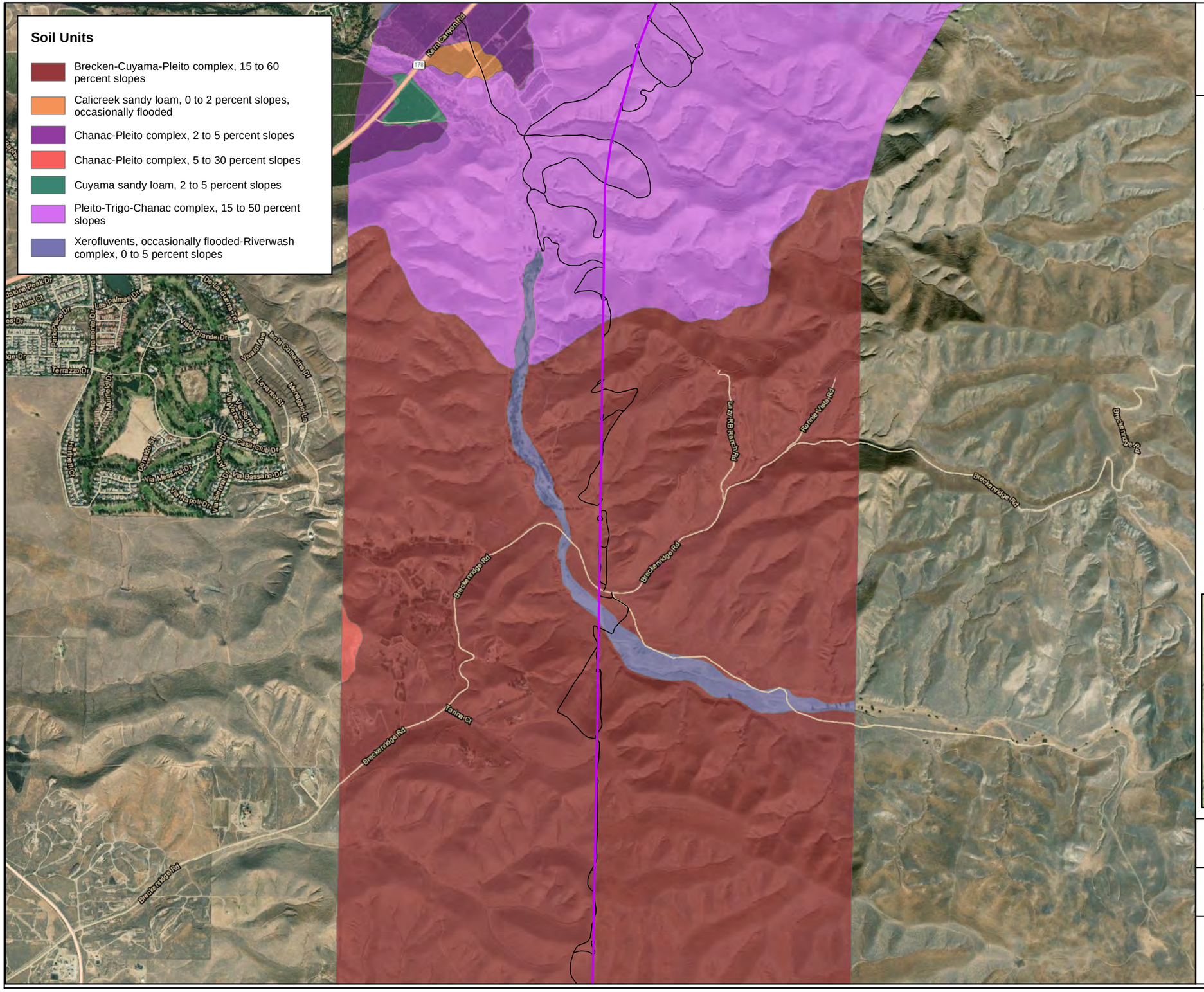

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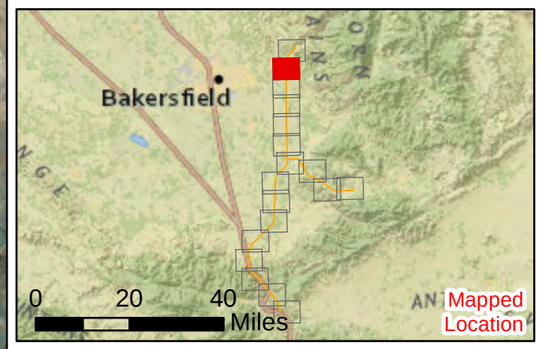

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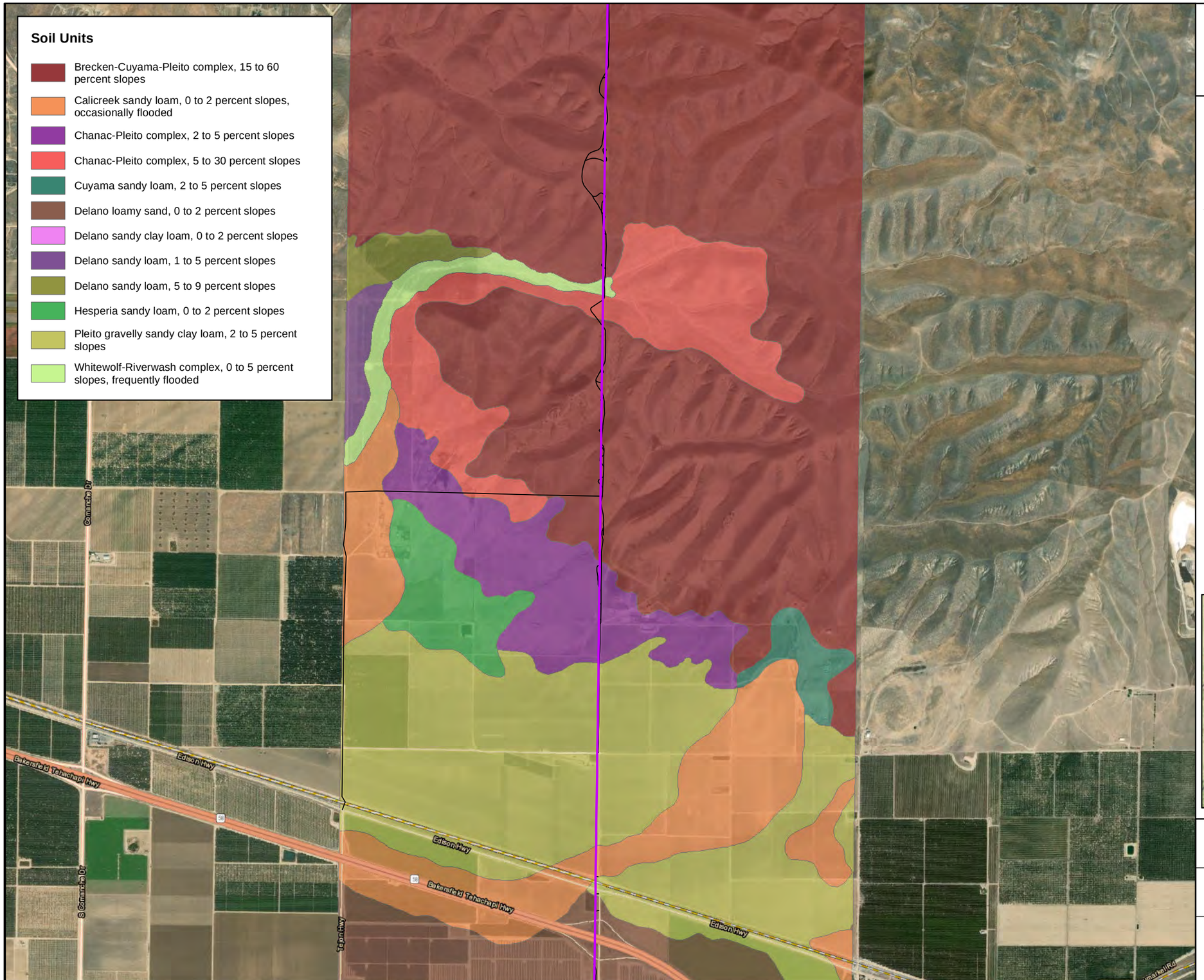

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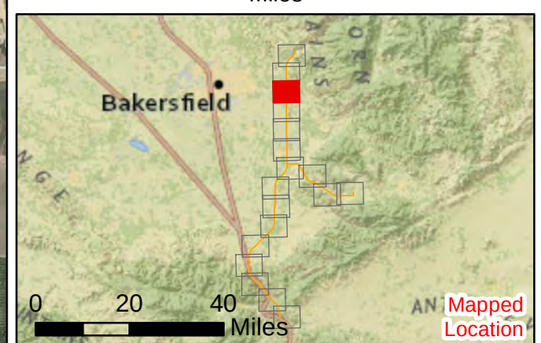

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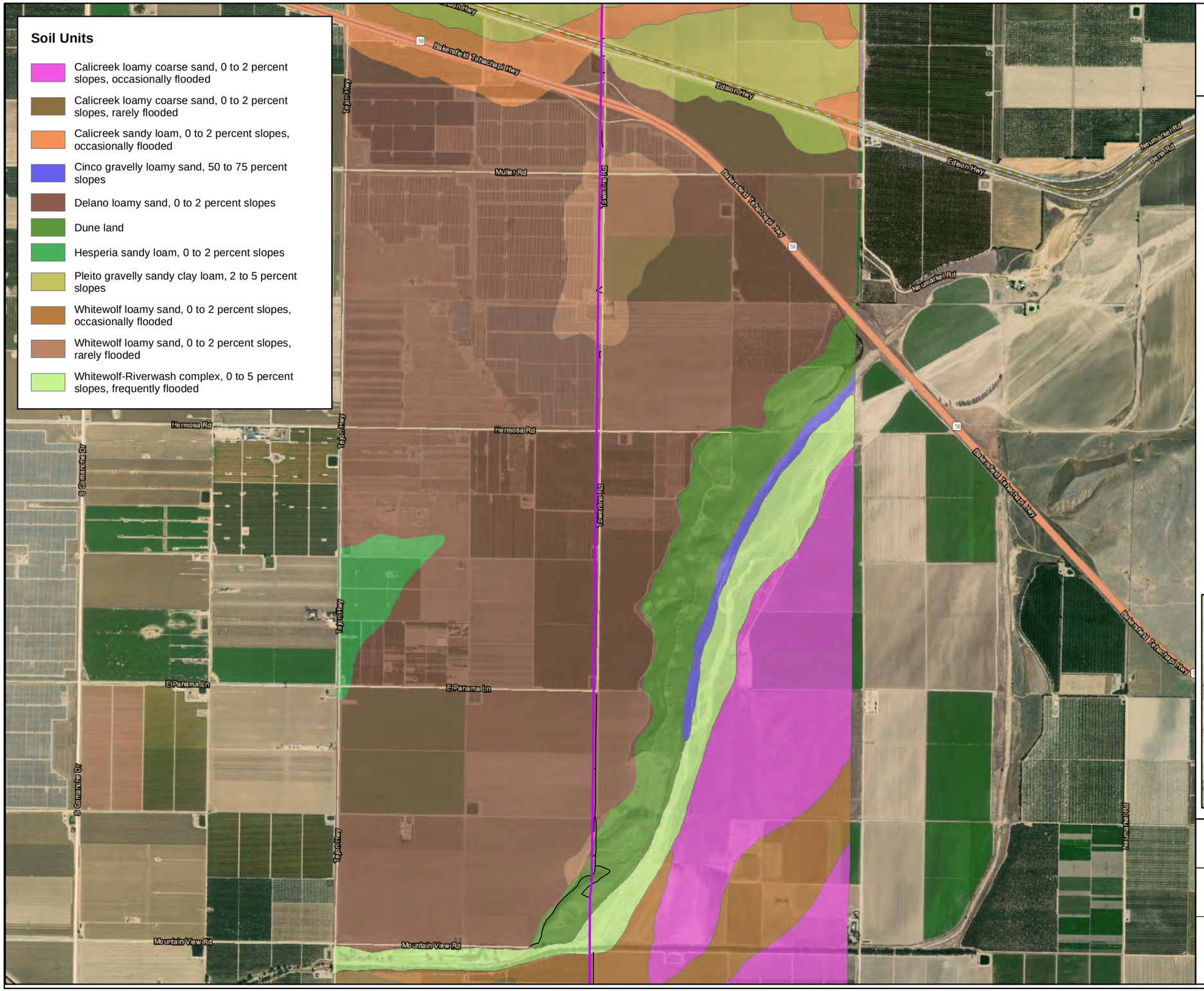

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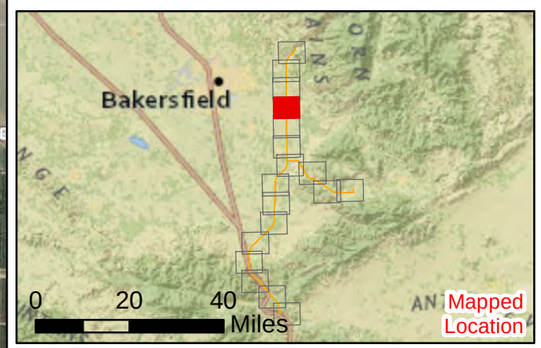

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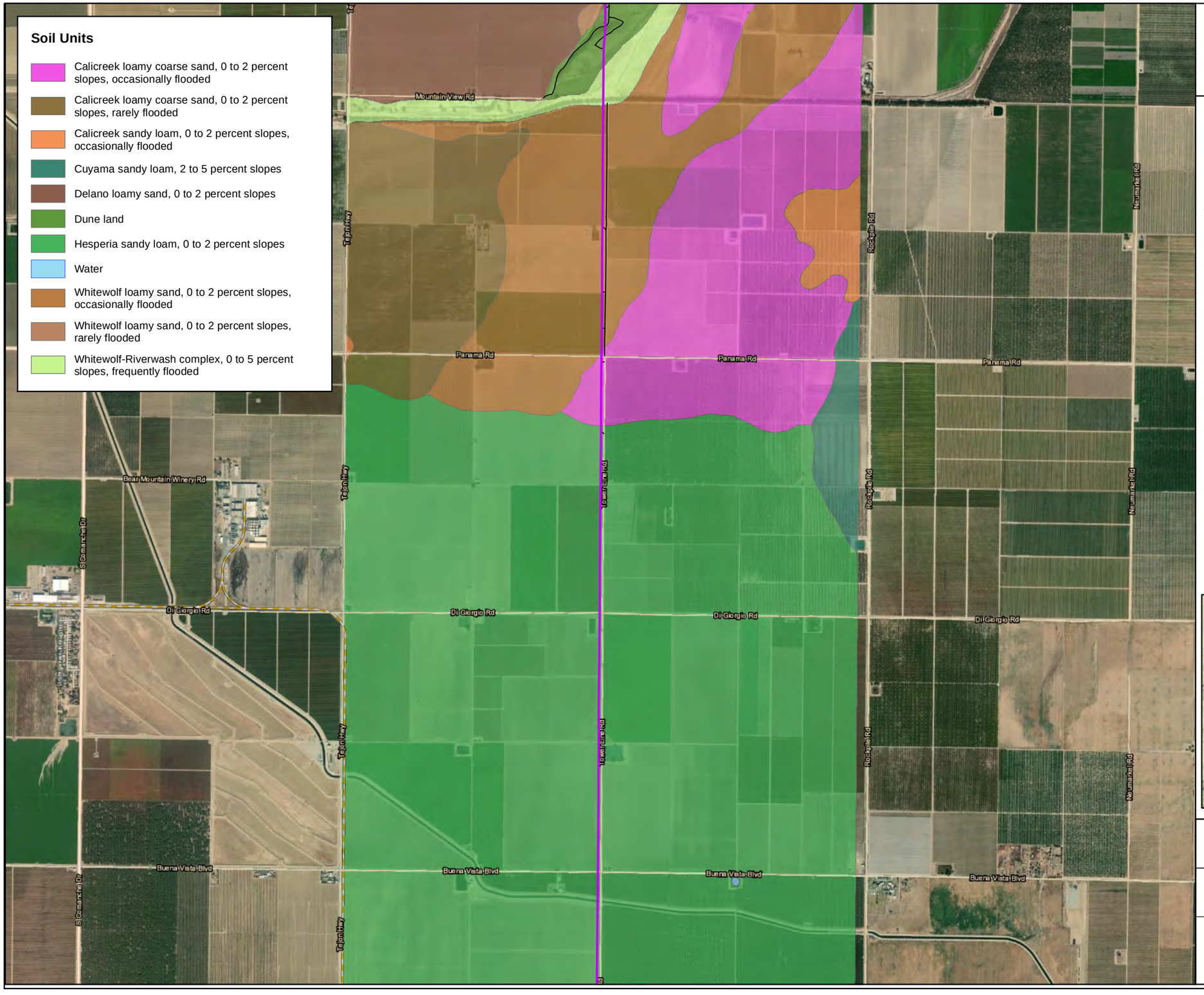

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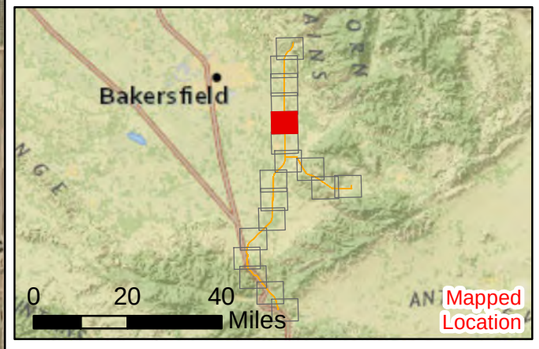

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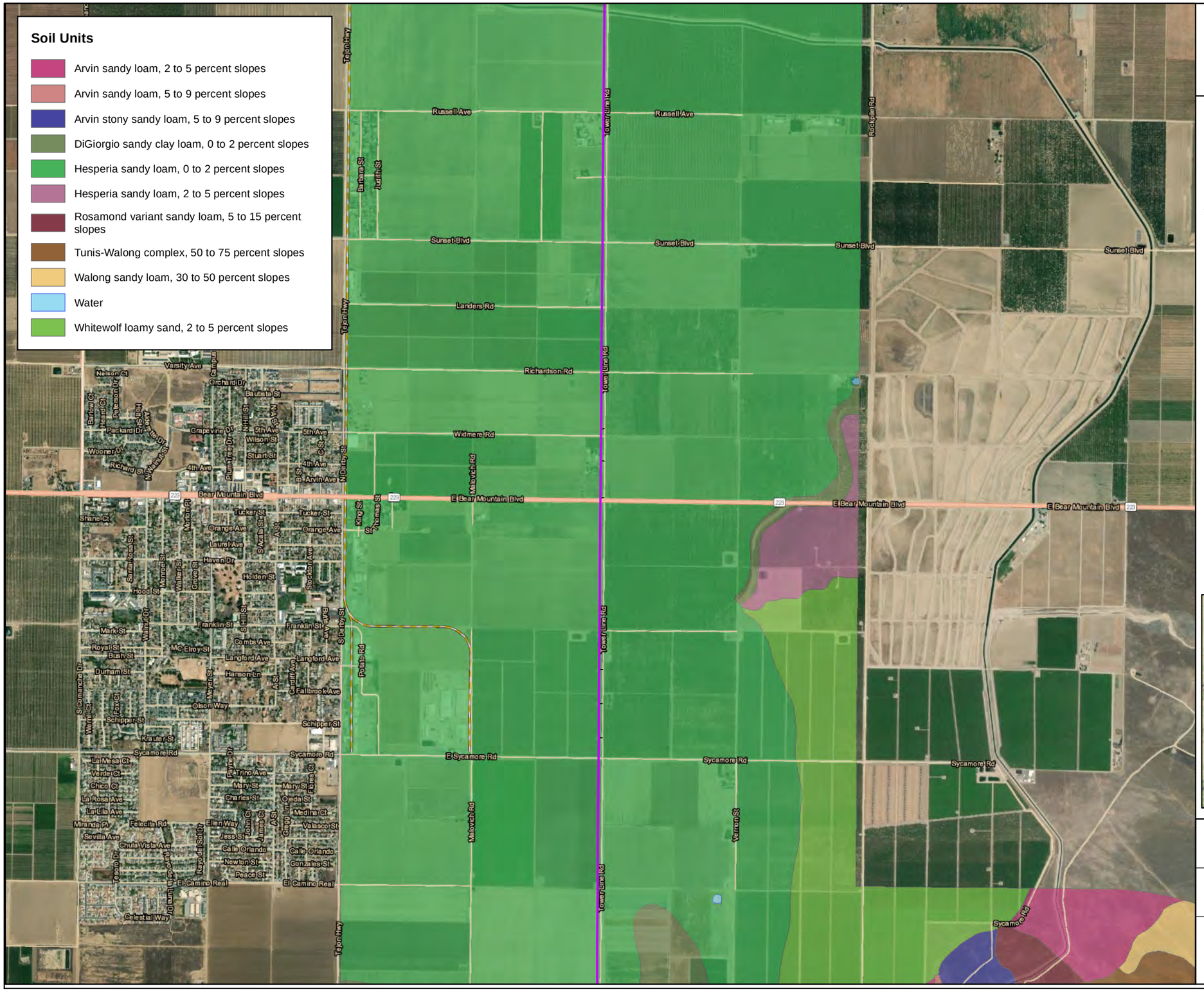

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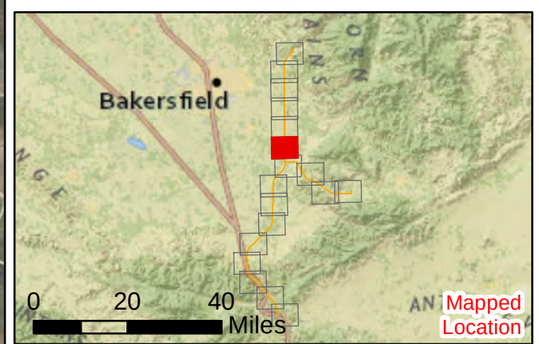

GORMAN-KERN RIVER 66 kV PROJECT

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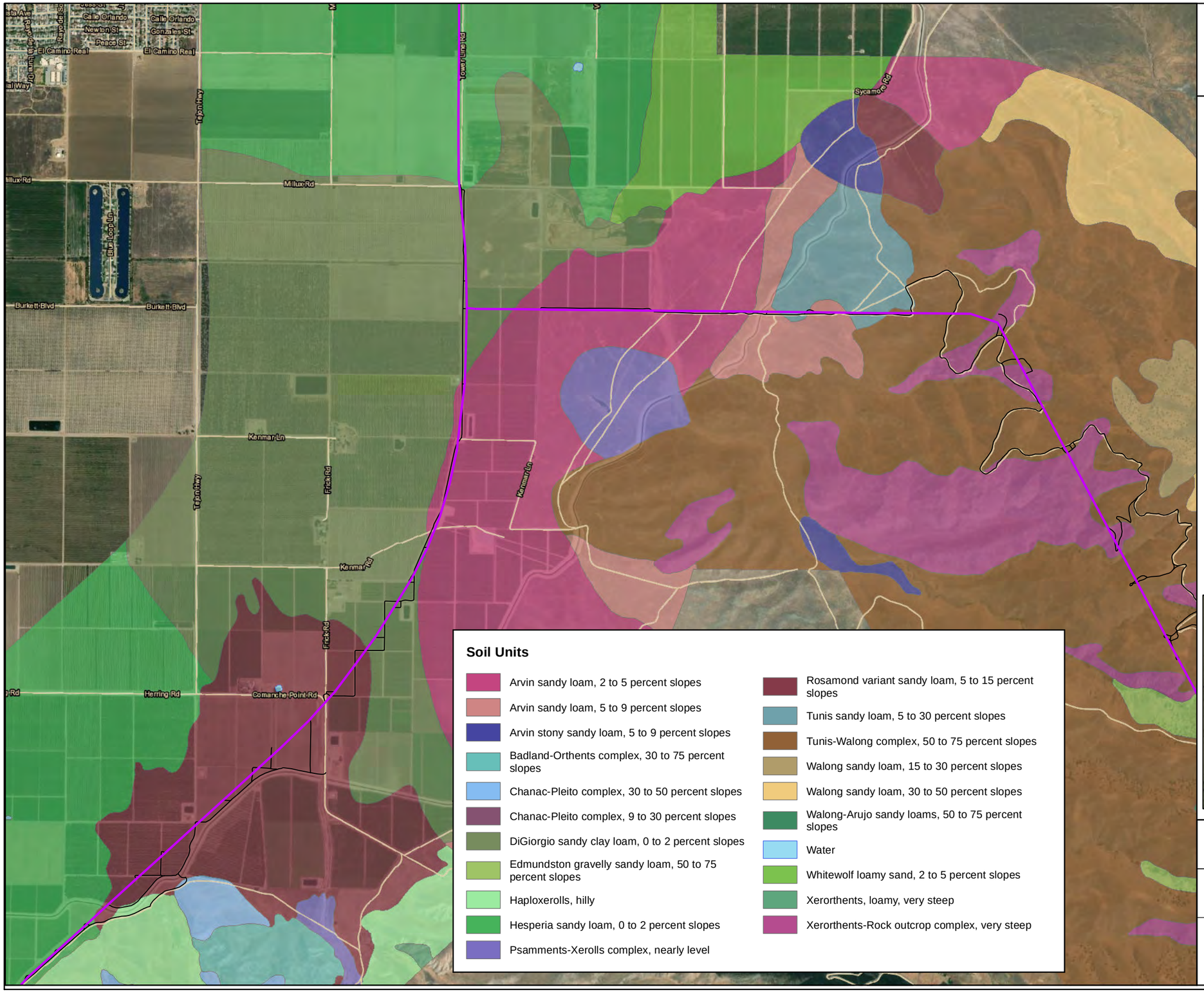

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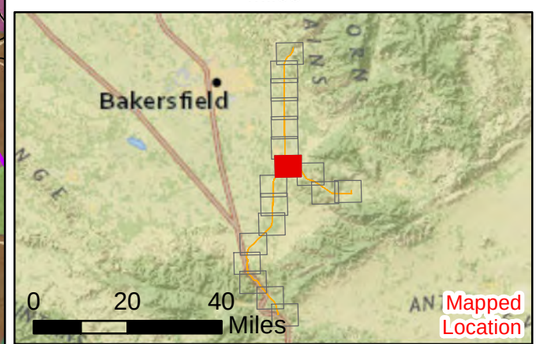
- GORMAN-KERN RIVER ALIGNMENT
- ACCESS ROADS

0 0.5 1
Miles



GORMAN-KERN RIVER 66 kV PROJECT

SSURGO SOIL UNITS

ARCADIS

Attachment C
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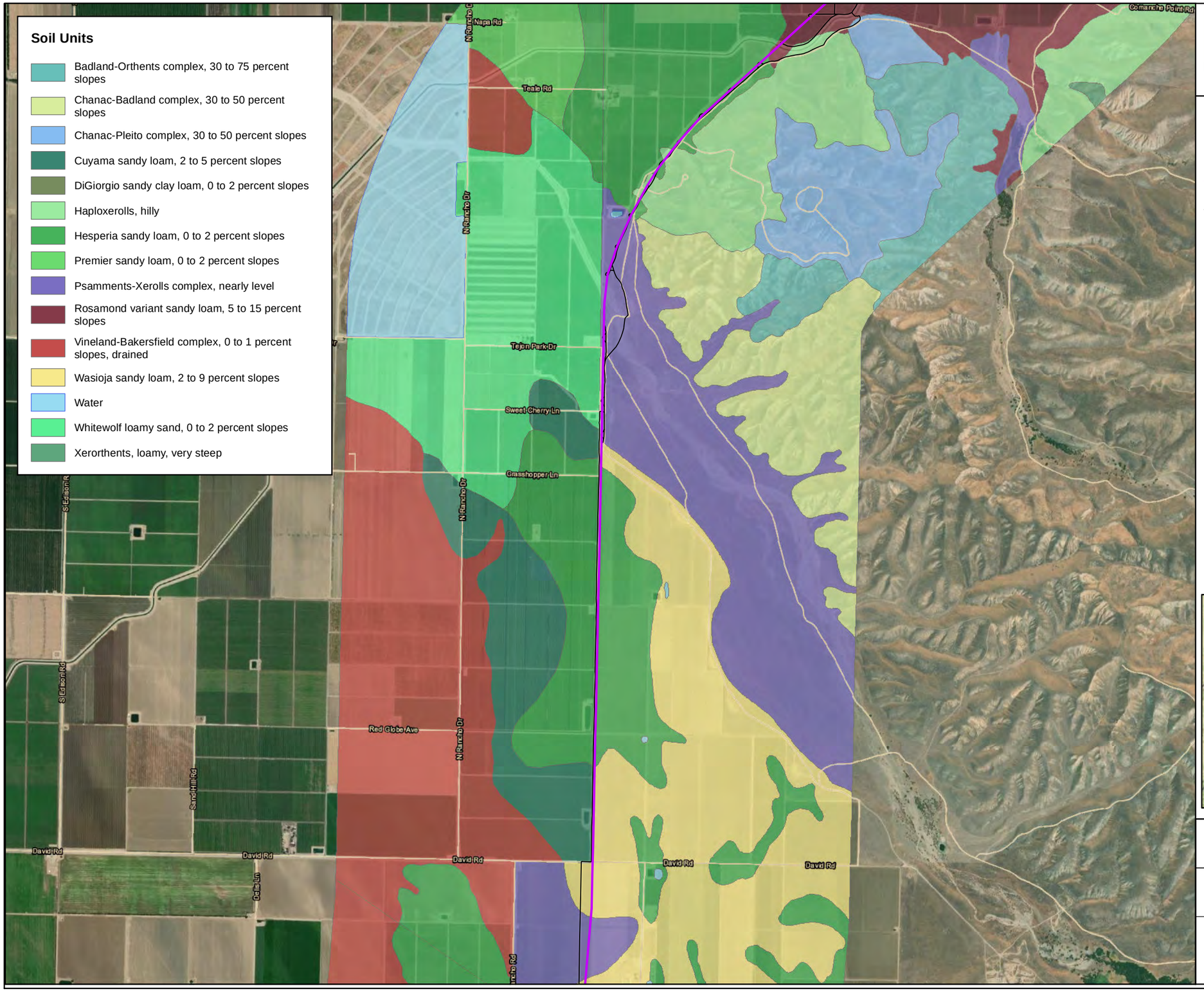

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LEGEND

- SUBSTATION LOCATION
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- ACCESS ROADS

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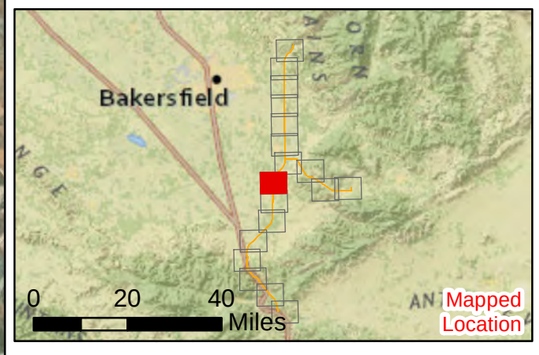

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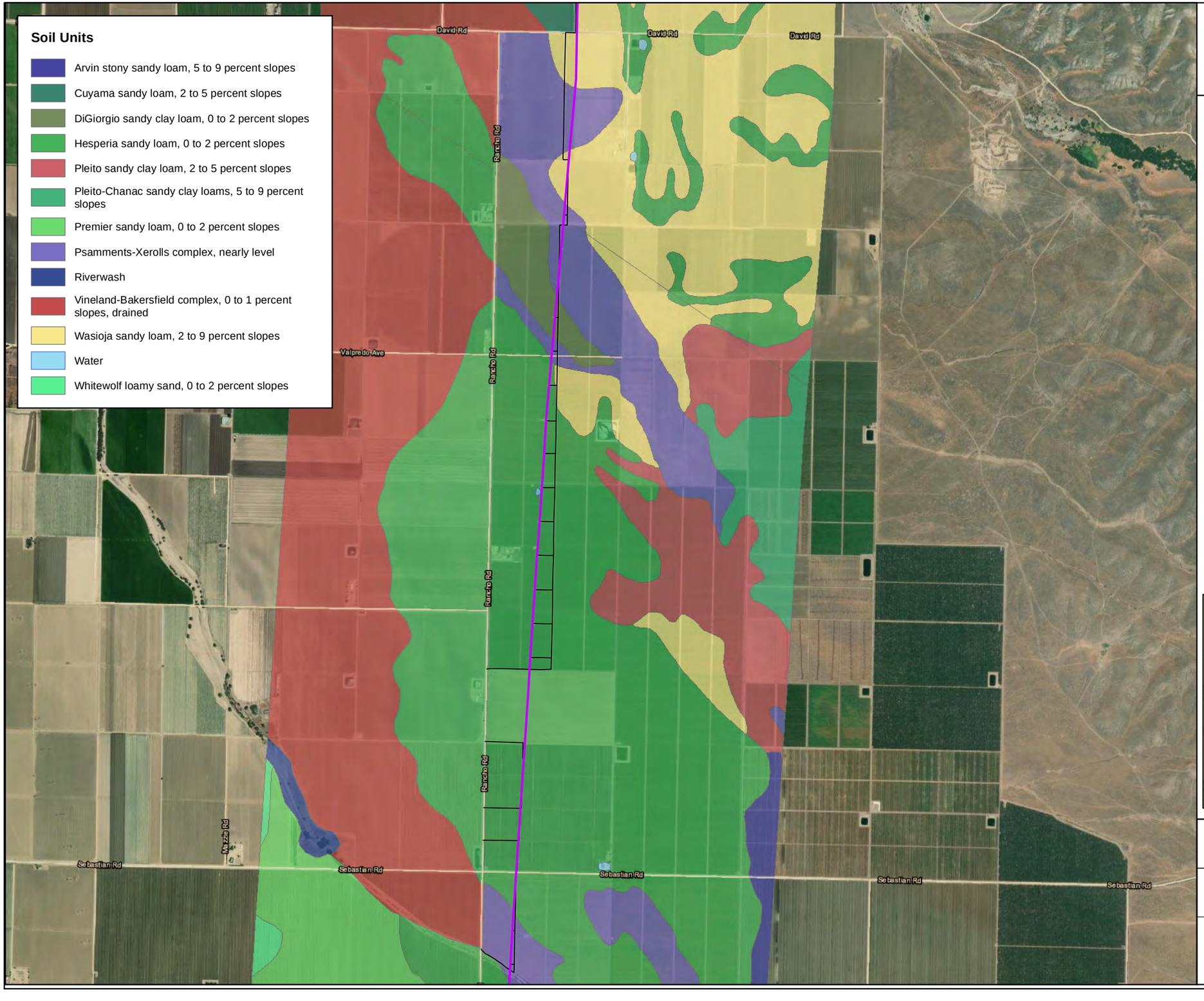

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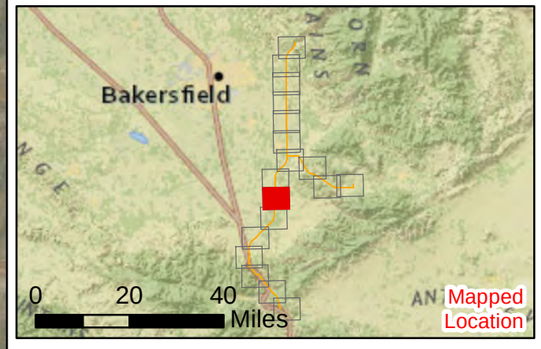

GORMAN-KERN RIVER 66 kV PROJECT

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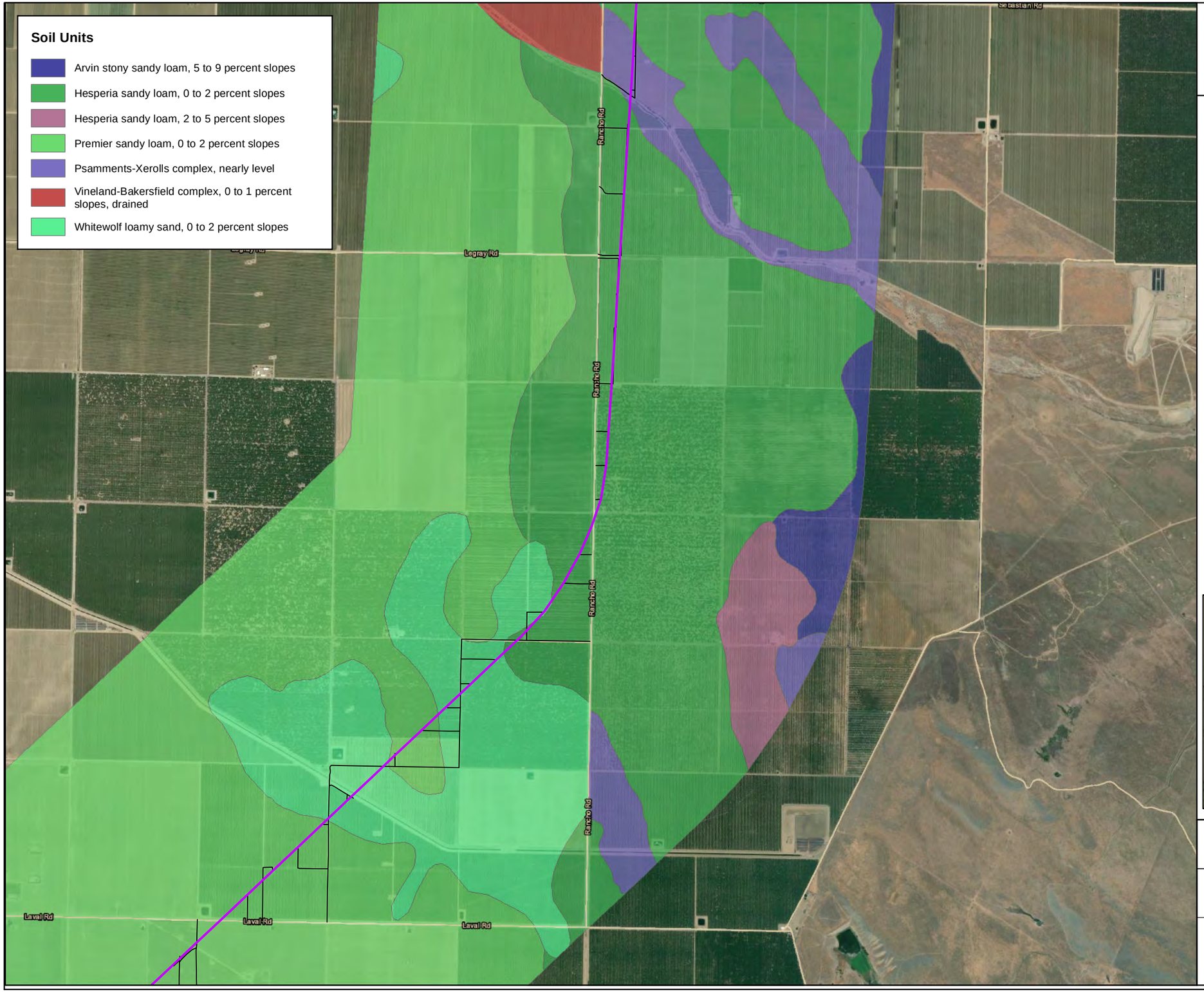

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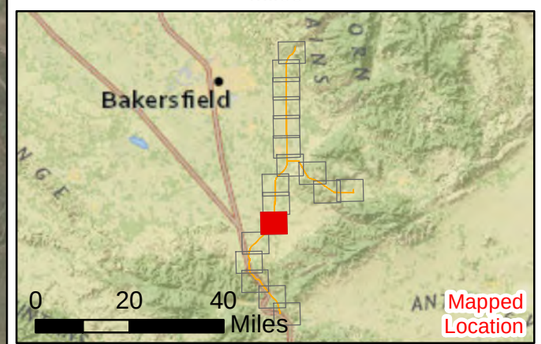

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SSURGO SOIL UNITS

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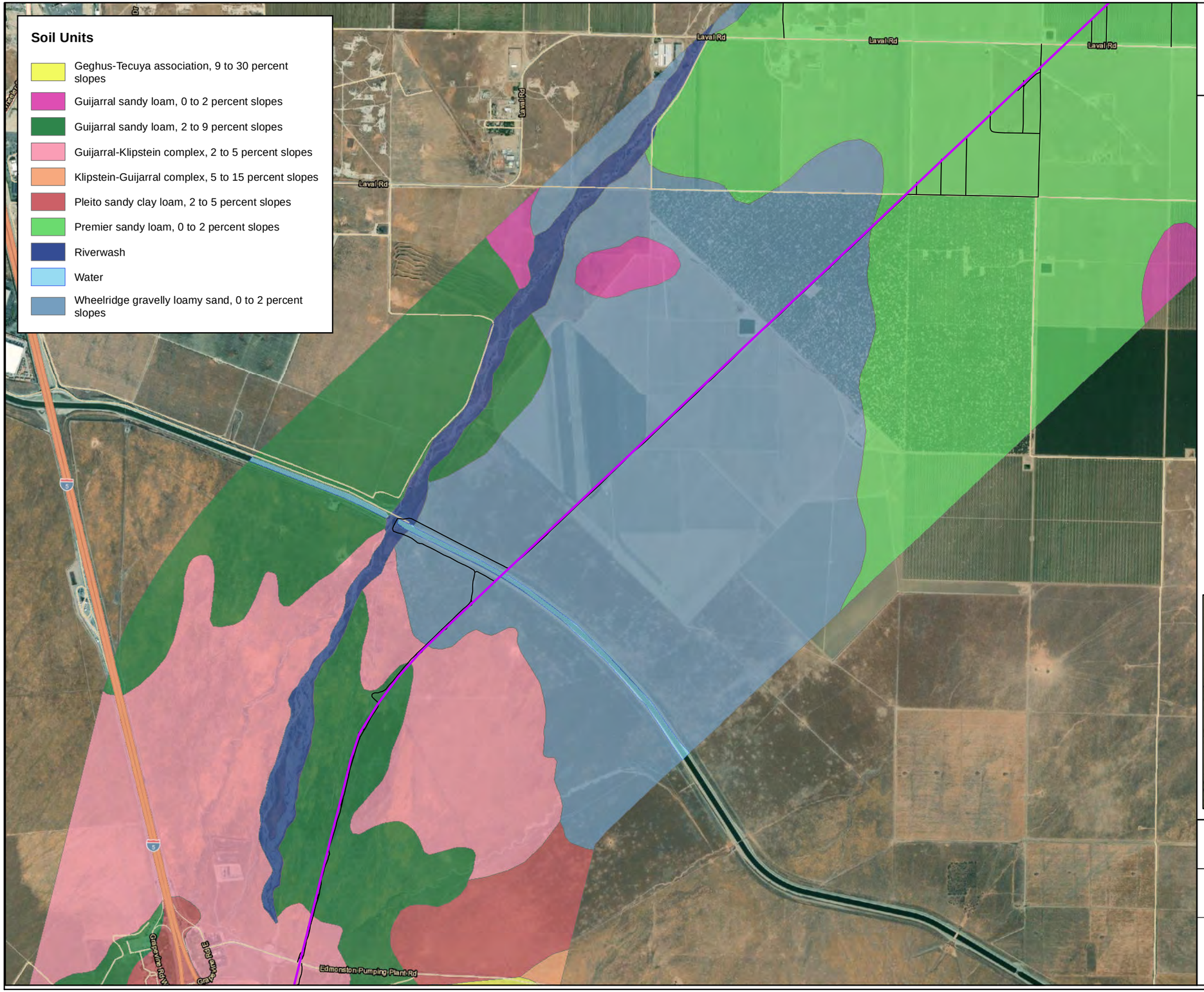

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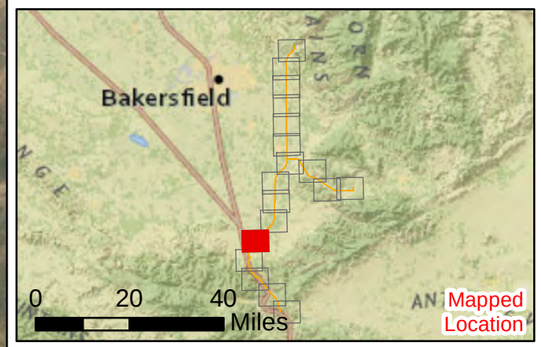

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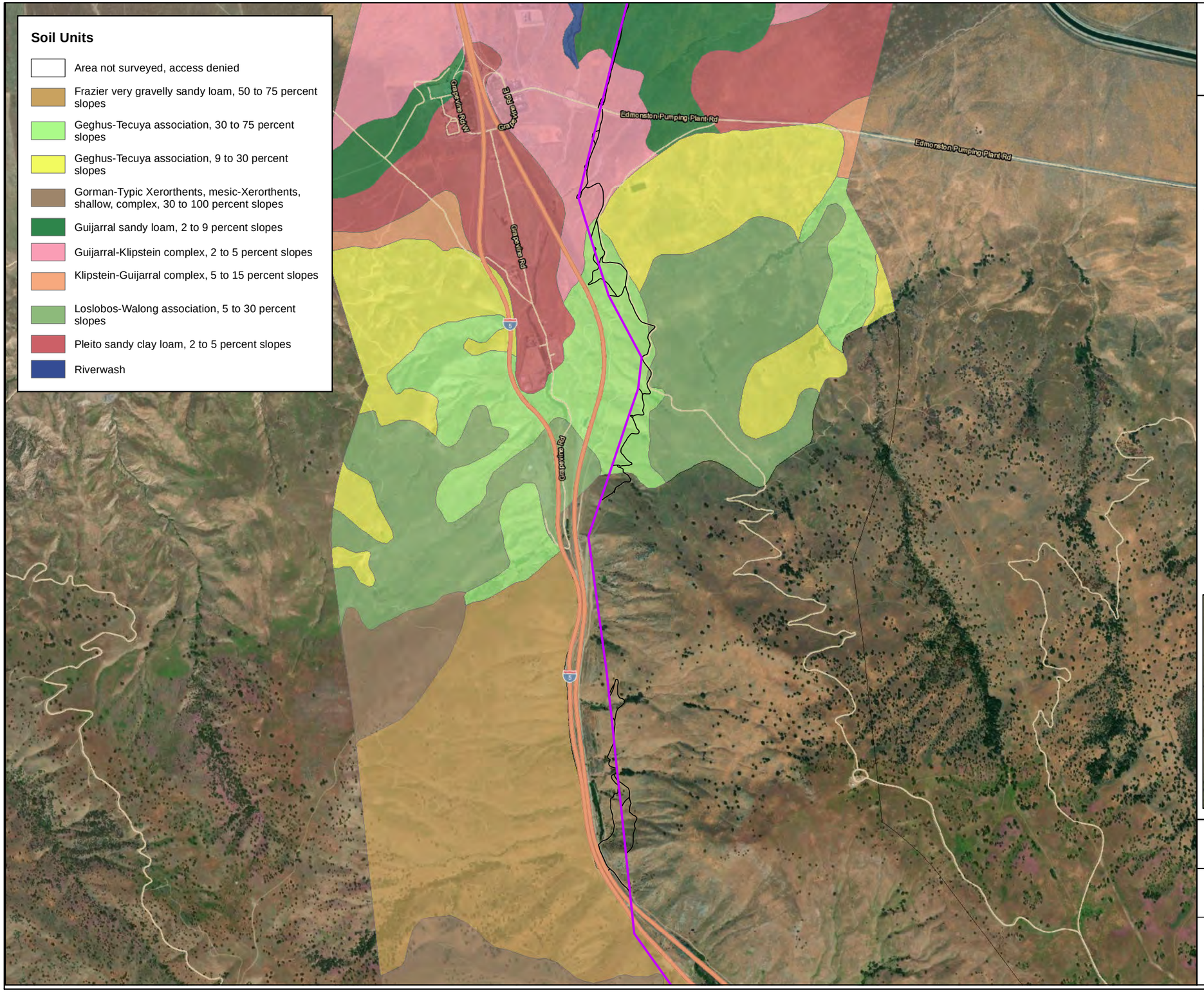

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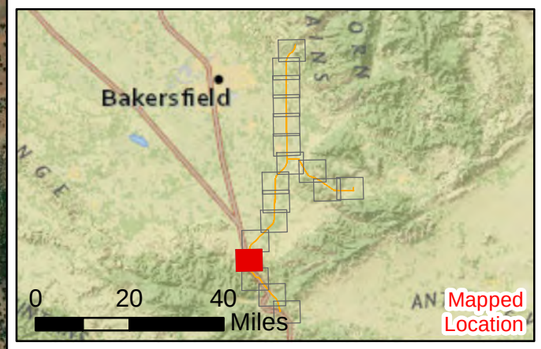

GORMAN-KERN RIVER 66 kV PROJECT

SSURGO SOIL UNITS

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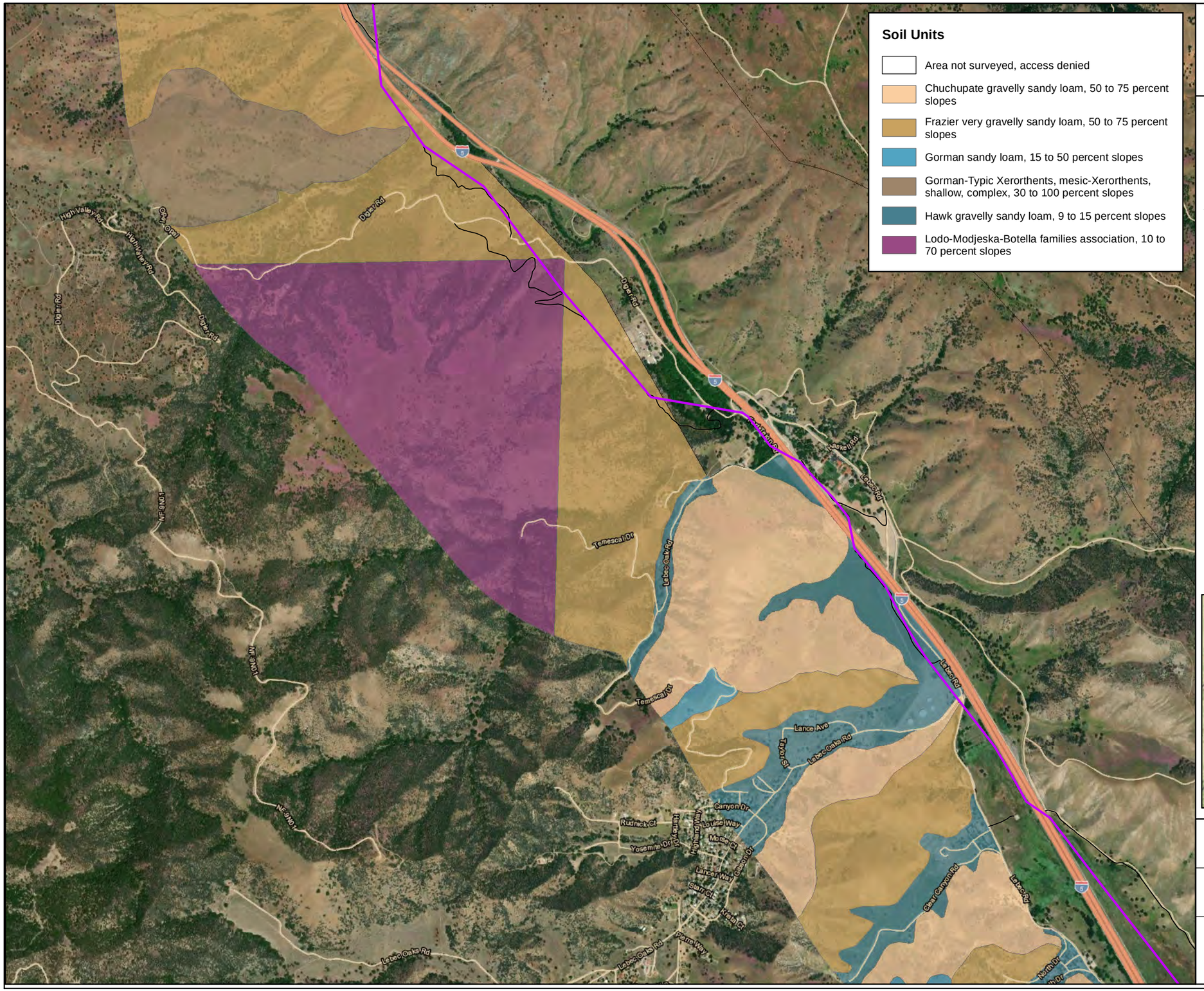

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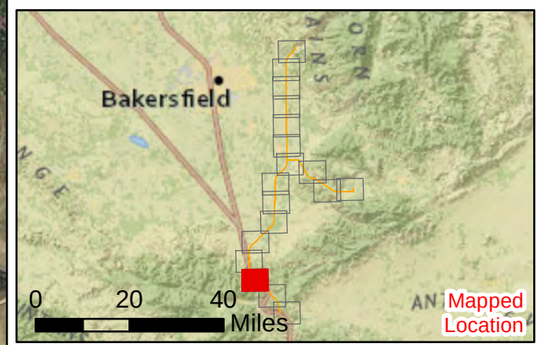

GORMAN-KERN RIVER 66 kV PROJECT

SSURGO SOIL UNITS

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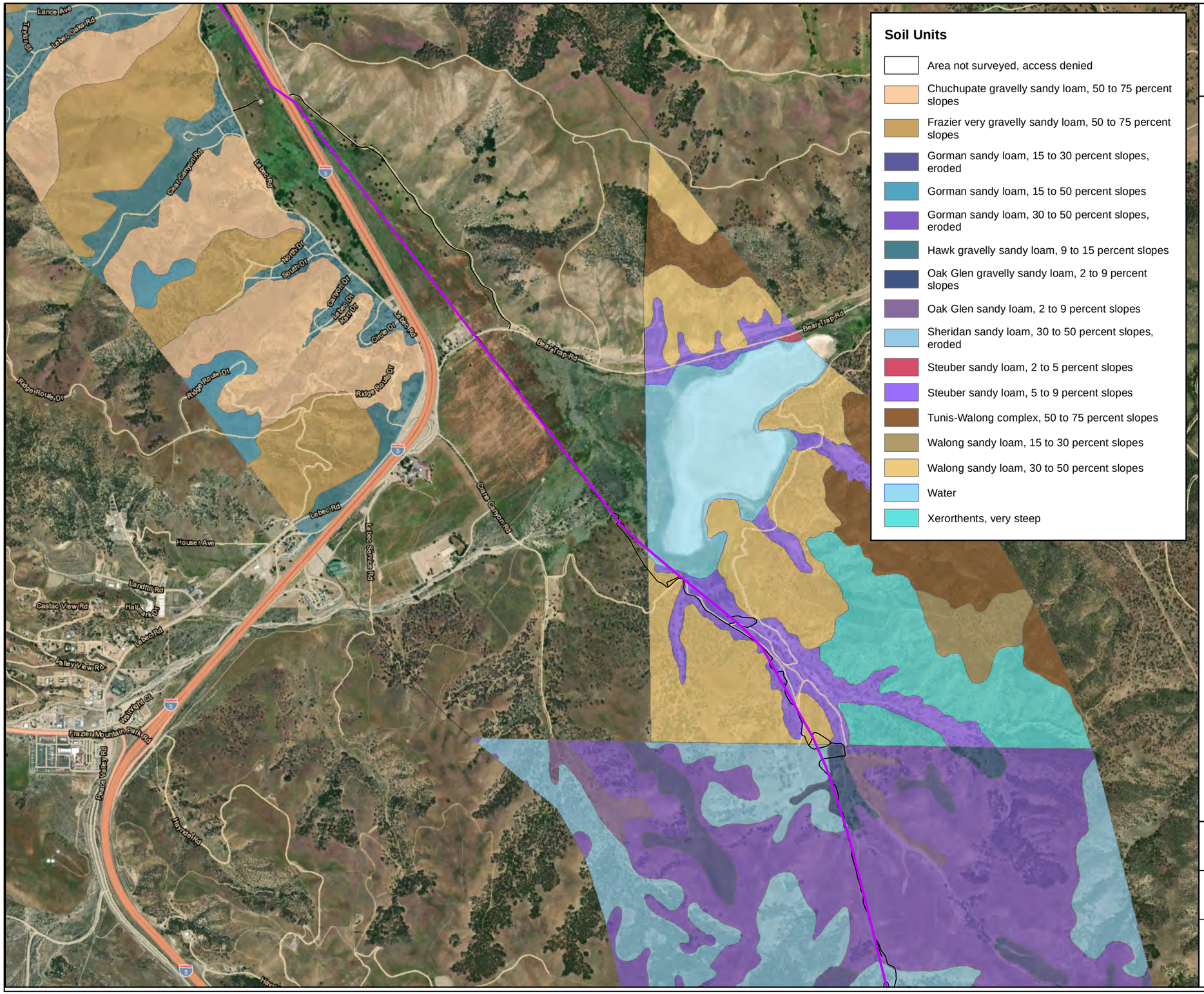

Soil Units

- Area not surveyed, access denied
- Chuchupate gravelly sandy loam, 50 to 75 percent slopes
- Frazier very gravelly sandy loam, 50 to 75 percent slopes
- Gorman sandy loam, 15 to 30 percent slopes, eroded
- Gorman sandy loam, 15 to 50 percent slopes
- Gorman sandy loam, 30 to 50 percent slopes, eroded
- Hawk gravelly sandy loam, 9 to 15 percent slopes
- Oak Glen gravelly sandy loam, 2 to 9 percent slopes
- Oak Glen sandy loam, 2 to 9 percent slopes
- Sheridan sandy loam, 30 to 50 percent slopes, eroded
- Steuber sandy loam, 2 to 5 percent slopes
- Steuber sandy loam, 5 to 9 percent slopes
- Tunis-Walong complex, 50 to 75 percent slopes
- Walong sandy loam, 15 to 30 percent slopes
- Walong sandy loam, 30 to 50 percent slopes
- Water
- Xerorthents, very steep

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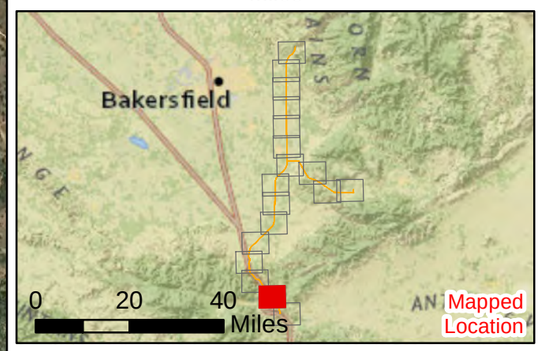

GORMAN-KERN RIVER 66 kV PROJECT

SSURGO SOIL UNITS

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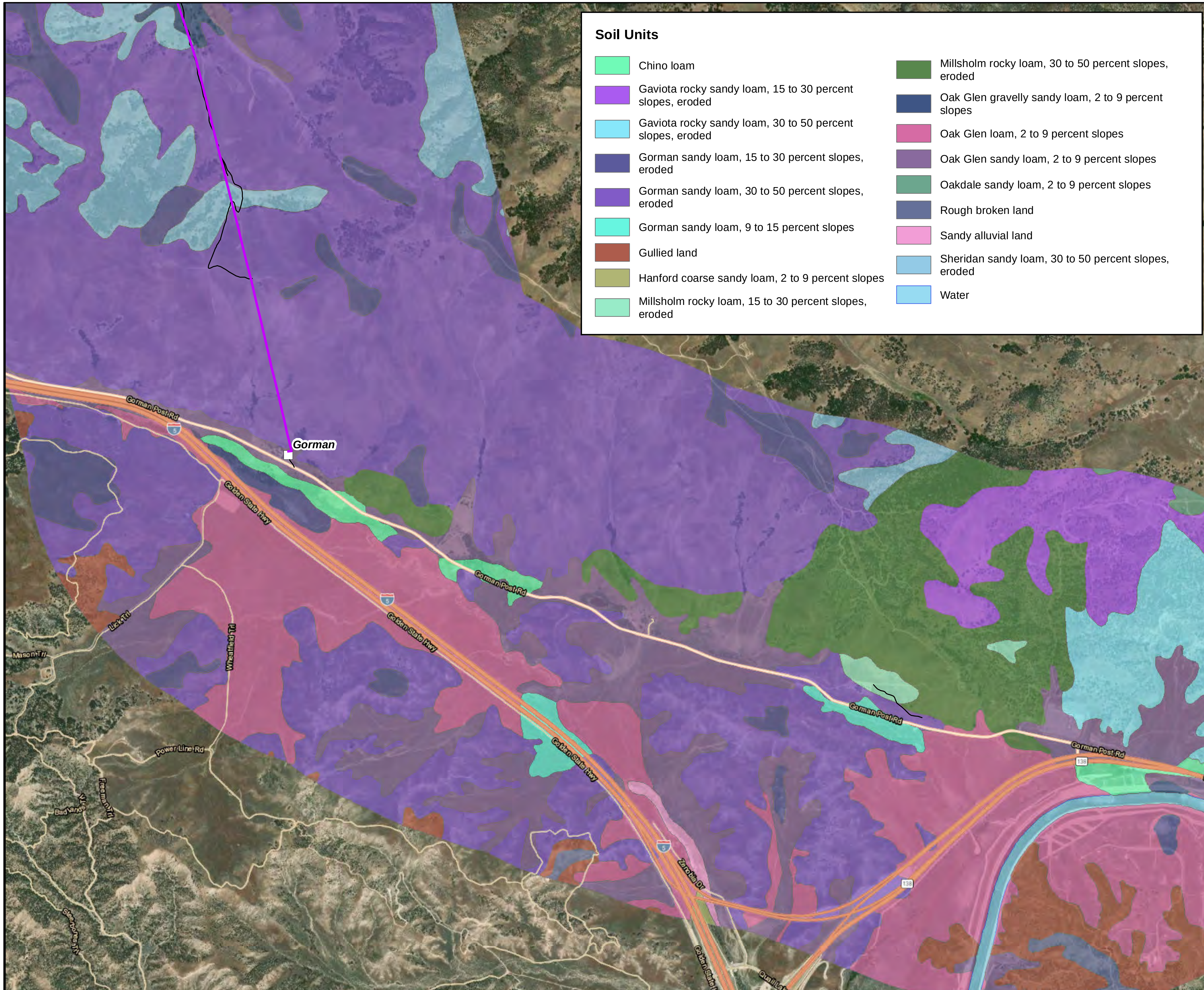

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LEGEND

SUBSTATION LOCATION

GORMAN-KERN RIVER ALIGNMENT

ACCESS ROADS

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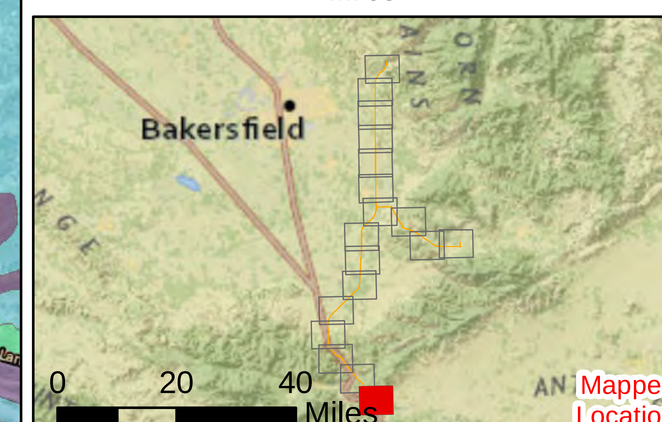
Miles



GORMAN-KERN RIVER 66 kV PROJECT

SSURGO SOIL UNITS

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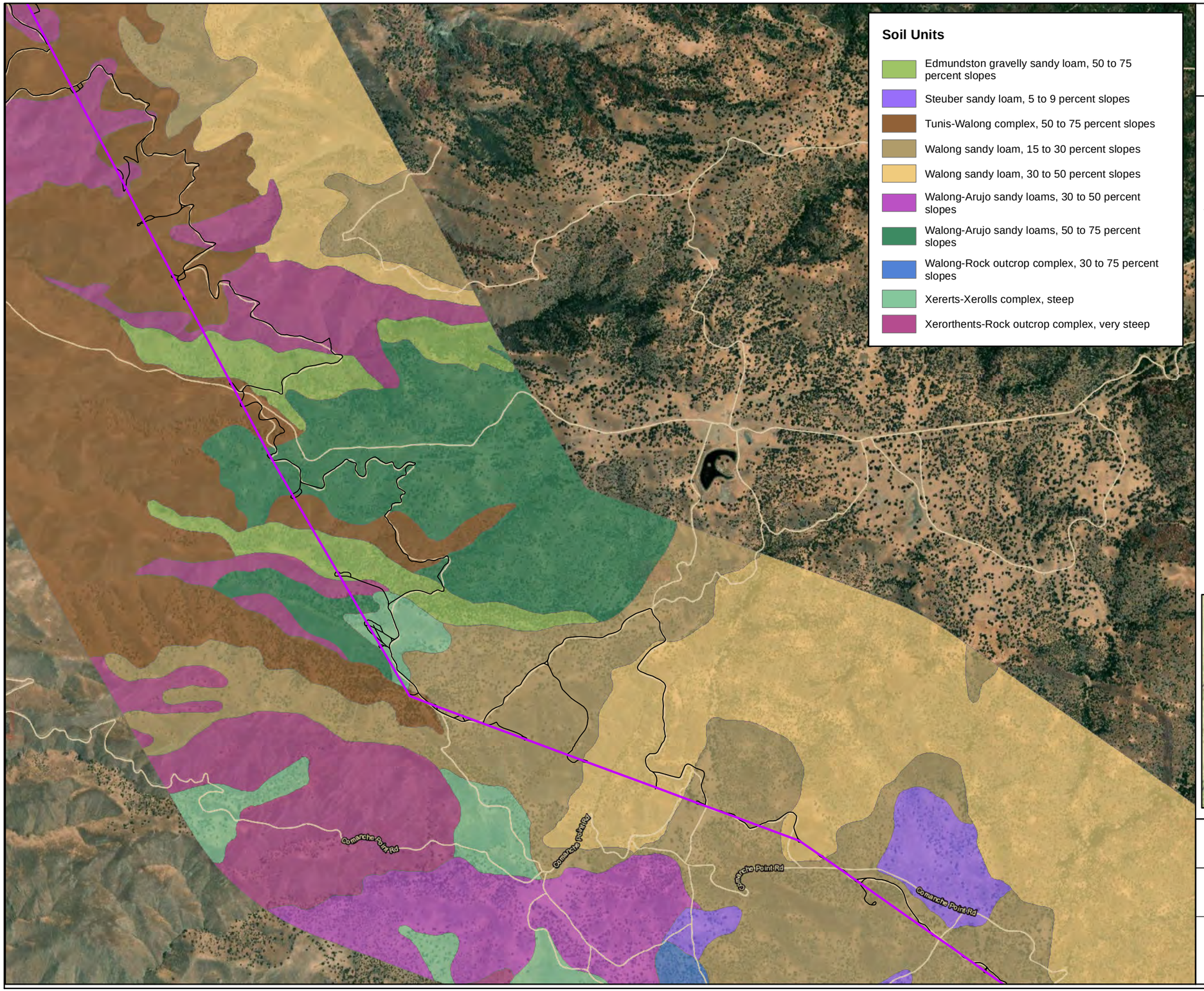

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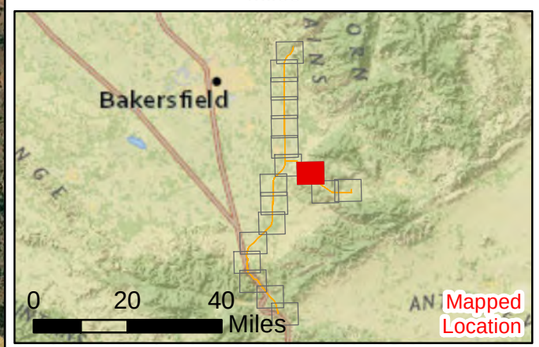

GORMAN-KERN RIVER 66 kV PROJECT

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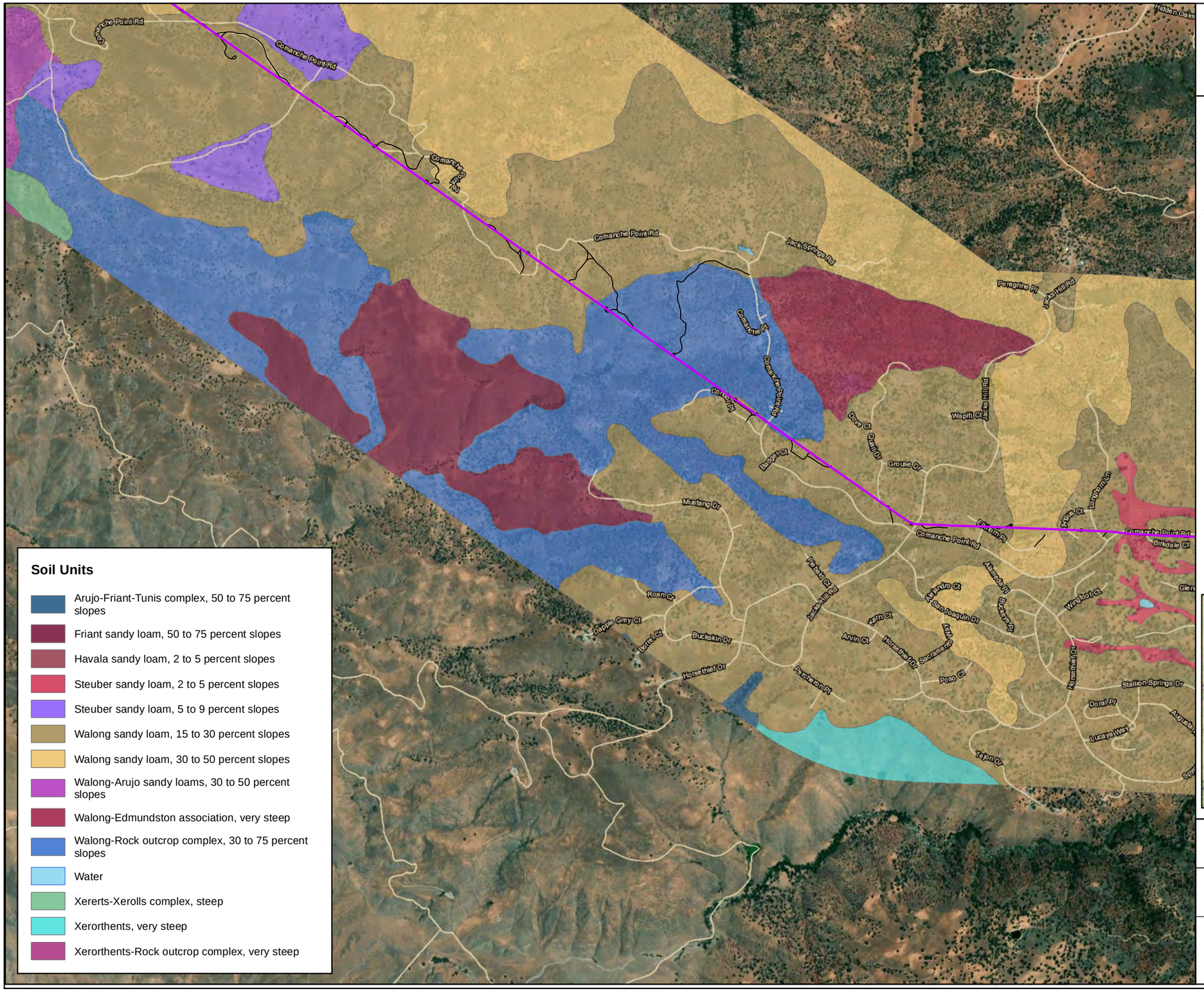

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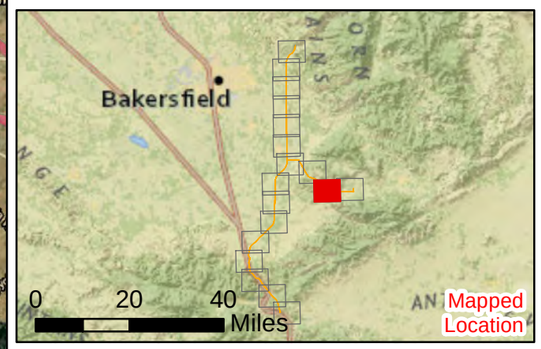

Soil Units

- Arujo-Friant-Tunis complex, 50 to 75 percent slopes
- Friant sandy loam, 50 to 75 percent slopes
- Havala sandy loam, 2 to 5 percent slopes
- Steuber sandy loam, 2 to 5 percent slopes
- Steuber sandy loam, 5 to 9 percent slopes
- Walong sandy loam, 15 to 30 percent slopes
- Walong sandy loam, 30 to 50 percent slopes
- Walong-Arujo sandy loams, 30 to 50 percent slopes
- Walong-Edmundston association, very steep
- Walong-Rock outcrop complex, 30 to 75 percent slopes
- Water
- Xererts-Xerolls complex, steep
- Xerorthents, very steep
- Xerorthents-Rock outcrop complex, very steep

GORMAN-KERN RIVER 66 kV PROJECT

SSURGO SOIL UNITS

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Attachment C

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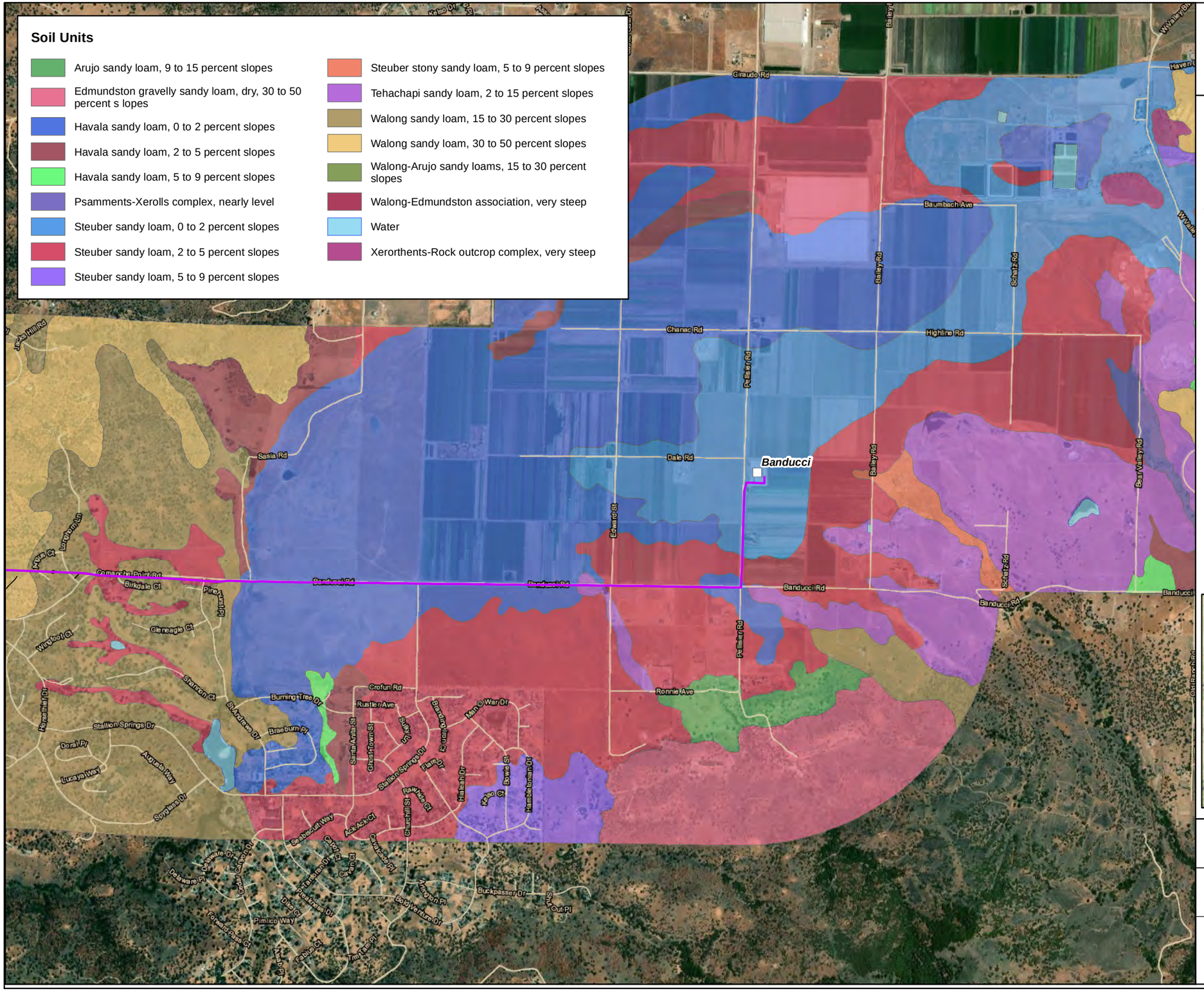

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LEGEND

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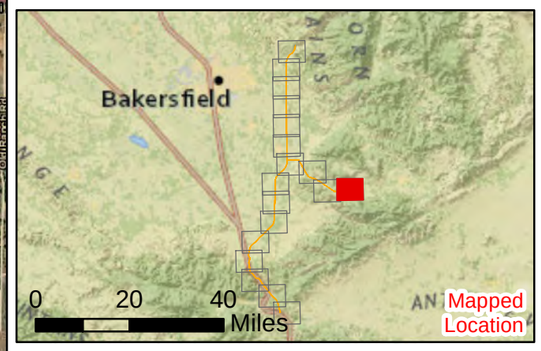

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Coordinate System: NAD 1983 UTM Zone 11N

ATTACHMENT D

Field Data Forms

001 "Wetland under the line"

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: TLRR (Kern River Line) City/County: Lebec / Kern Sampling Date: 4/5/14

Applicant/Owner: State: CA Sampling Point:

Investigator(s): MC + PL Section, Township, Range:

Landform (hillslope, terrace, etc.): base of hill Local relief (concave, convex, none): concave Slope (%): 0

Subregion (LRR): Arid west Lat: 34.876339 Long: -118.897624 Datum:

Soil Map Unit Name: "Area not surveyed access denied" NWI classification: PEMIC + PFOC

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

Are Vegetation , Soil , or Hydrology significantly disturbed? NO Are "Normal Circumstances" present? Yes X No

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

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

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

Remarks:
Assumed hydric soils present, large saturated area w/ stream running through
Dominate Vegitation Fac species, sandy loam, manipulated wetland

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	10	yes	~~FACW~~
2. Salix lucida	25	yes	~~FACW~~
3.			
4.			
	35	= Total Cover	

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

Herb Stratum (Plot size:)			
1. Lepidium latifolium	25	yes	~~UPL~~
2. Schoenoplectus americanus	20	yes	~~OBL~~
3. Conium maculatum	5	yes	FAC
4. Typha sp.	10	yes	~~OBL~~
5. Bromus sp.	5		UPL
6.			
7.			
8.			
	65	= Total Cover	

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

% Bare Ground in Herb Stratum % Cover of Biotic Crust

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

__ Prevalence Index is ≤3.0[1]

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No

Remarks:
Dominate vegetation fac sp., Typha not up, not able to ID
Willows in middel of feature along stream

001

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

Clay lense below rocky/sandy soils
man made waterretentionand creek maybe creating this wetland area
manipulated

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- X Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- X Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ____ Depth (inches): 0

Water Table Present? Yes ____ No ____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

aerial photos,

Remarks:

Freshwater Forested/Shrub wetland

002 "Fort Tejon"

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: TLRR (Kern River) City/County: Frazier Sampling Date: 4/5/17

Applicant/Owner: State: CA Sampling Point:

Investigator(s): MC, PL Section, Township, Range:

Landform (hillslope, terrace, etc.): River Local relief (concave, convex, none): concave Slope (%): 9-15%

Subregion (LRR): Arid West Lat: 34.874118 Long: -118.892504 Datum:

Soil Map Unit Name: Hawk sandy/gravely (closest to it) NWI classification: R4SBC

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

Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No

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

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

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

Remarks: River and adjacent wetland/riparian habitat. Intermittent and seasonally flooded area.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum % Cover of Biotic Crust

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ Dominance Test is >50%
- ___ Prevalence Index is ≤3.0[1]
- ___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No

Remarks:

002

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ✓ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ✓ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

003 "The BIG ONE" W side of HWY 5

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: TLRR (Kern River) City/County: Lebec / Kern Sampling Date: 4/5/17

Applicant/Owner: State: CA Sampling Point:

Investigator(s): MC, PL Section, Township, Range:

Landform (hillslope, terrace, etc.): meadow Local relief (concave, convex, none): concave Slope (%): 0

Subregion (LRR): Arid West Lat: 34.855594 Long: -118.875125 Datum:

Soil Map Unit Name: Access denied, not surveyed NWI classification: PEMIA / PEMIC

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? no Are "Normal Circumstances" present? Yes X No

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

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

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

Remarks: no soil info area not mapped per soil survey (USDA) adjacent to 5 freeway

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus velutina	50	yes	FACW
2.			
3.			
4.			
	50	= Total Cover	

Sapling/Shrub Stratum (Plot size: 25 30 10 12)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

Herb Stratum (Plot size: ____)			
1. Typha sp.	20	yes	OBL
2. Lepidium latifolium	20	yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
	40	= Total Cover	

Woody Vine Stratum (Plot size: 10 8)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ Dominance Test is >50%
- ___ Prevalence Index is ≤3.0[1]
- ___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No

Remarks:
lots of invassive pepperweed

003

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

Soil samples not taken, assumed hydric soils

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 0

Water Table Present? Yes ___ No ___ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No ___

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

Remarks:

Surface water + saturated soils

004 "On the farm E side of 5 HWY

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: TLRR / Kern River City/County: Lebec / Kern Sampling Date: 4/4/17

Applicant/Owner: State: CA Sampling Point:

Investigator(s): PL / MC Section, Township, Range:

Landform (hillslope, terrace, etc.): Agricultural field Local relief (concave, convex, none): hillside Slope (%): 2%

Subregion (LRR): Arid West Lat: 34847427 Long: -118.867513 (mid) Datum:

Soil Map Unit Name: 4reanct surveyed NWI classification: Freshwater emergent wetland

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

Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

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

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

Hydrophytic Vegetation Present?	Yes X No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X ?
Hydric Soil Present? Assumed	Yes X No ____	
Wetland Hydrology Present?	Yes X No ____	

Remarks:
waiting to take samples to get permission to dig on property

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ____)			
1. Ø			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. Ø			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: ____)			
1. Carex praegracilis	30	yes	obl
2. Juncus sp.	20	yes	fac
3. clover / trifolium sp.	10	no	
4. brome sp.	10	yes	upl
5. rumex sp.	10	yes	
6.			
7.			
8.			
	80	50 = Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust ____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No /

Remarks:
Juncus not flowering
Sp. not ID. assume obl ID Sp. as present
assume upl 30%

004

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes / No _____

Remarks:

assumed hydric soils, did not dig pits

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- X Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes / No _____

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

Remarks: Surface water present under tower

005 "Before lake"

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: TLRR (Kern River) City/County: Lebec / Kern Sampling Date: 4/6/17

Applicant/Owner: State: CA Sampling Point:

Investigator(s): PL Section, Township, Range:

Landform (hillslope, terrace, etc.): grassland Local relief (concave, convex, none): none Slope (%): 0

Subregion (LRR): Arid West Lat: 34.83476106 Long: -118.85438617 Datum:

Soil Map Unit Name: area not surveyed (980) NWI classification: Freshwater emergent wetland

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

Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

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

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

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

Remarks:
no surface water or saturation present

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. N/A			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: ____)			
1. red stem filare			
2. pepperweed			
3. Bromus			
4. rush sp.			
5.			
6.			
7.			
8.			
	= Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust ____

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ____

Remarks:

005

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- X Sediment Deposits (B2) **(Nonriverine)**
- X Drift Deposits (B3) **(Nonriverine)**
- X Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes X No _____

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

Remarks:

006 The Lake (castac)

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: TLRR (Kern River) City/County: Lebec / Kern Sampling Date: 4/6/17

Applicant/Owner: State: CA Sampling Point:

Investigator(s): PL Section, Township, Range:

Landform (hillslope, terrace, etc.): lake / shore Local relief (concave, convex, none): concave Slope (%): 5-9

Subregion (LRR): Arid West Lat: 34.827167 Long: -118.845691 Datum:

Soil Map Unit Name: Steuber sandy loam NWI classification: Lake / Freshwater emergent wetland

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

Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes X No

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

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

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

Remarks:
Hydric soils assumed, no samples taken, all areas w/in survey boundary were w/in obviously defined wetland or shoreline areas

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1. Populus fremontii	40	yes	upl
2. Salix lasiandra	40	yes	FACW
3. Salix sp.			
4.			
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 20 x)			
1. Baccharis salicifolia	60	yes	FACW
2.			
3.			
4.			
5.			
	60	= Total Cover	
Herb Stratum (Plot size: 30 12)			
1. Typha sp.	30	yes	obl
2. Lepidium latifolium	20	yes	upl
3.			
4.			
5.			
6.			
7.			
8.			
	50	= Total Cover	
Woody Vine Stratum (Plot size: 25 10)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum % Cover of Biotic Crust

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ Dominance Test is >50%
- ___ Prevalence Index is ≤3.0[1]
- ___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No

Remarks:

006

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

no soil pits dug, assumed hydric soils w/ district boundaries

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- X Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- X Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): _____

Water Table Present? Yes ___ No ___ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): _____

Wetland Hydrology Present? Yes X No ___

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

Remarks:

Area is on the lake's banks, possibly old edge, now water level lower

OC7 along 5fnw

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Kern / TLRR City/County: Kern/Lebec Sampling Date: 4/5/17

Applicant/Owner: State: CA Sampling Point:

Investigator(s): Paulette Laubet Section, Township, Range:

Landform (hillslope, terrace, etc.): meadow Local relief (concave, convex, none): Concave Slope (%): 0

Subregion (LRR): Arid West Lat: 34.859405 Long: -118.877648 Datum:

Soil Map Unit Name: Area not surveyed NWI classification: PEMICx

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

Are Vegetation , Soil , or Hydrology significantly disturbed? NO Are "Normal Circumstances" present? Yes X No

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

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

Hydrophytic Vegetation Present? Yes X No

Hydric Soil Present? Assumed Yes No

Wetland Hydrology Present? Yes X No

Is the Sampled Area within a Wetland? Yes X No

Remarks:
Freshwater Emergent wetland
*manipulated/excavated

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus fremontii	40	yes	FAC
2.			
3.			
4.			
	40 = Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1. Typha sp.	50	yes	OBL
2. Lepidium latifolium	20	yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum % Cover of Biotic Crust

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

Prevalence Index is ≤3.0[1]

Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks:
lots of non native pepper weed
Typha not identifiable to species w/ alt seed head

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

no soilpit dug, assumed hydric soils

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): _____

Wetland Hydrology Present? Yes X No _____

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

Remarks:

Area manipulated by grazing and freeway
seasonally flooded

008 *may not be true wetland, flooded stream...

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: TLRR (Kern River) City/County: Tehachipi / Kern Sampling Date: 4/13/17

Applicant/Owner: _____ State: CA Sampling Point: _____

Investigator(s): PL / MC Section, Township, Range: _____

Landform (hillslope, terrace, etc.): grassland Local relief (concave, convex, none): concave Slope (%): 0

Subregion (LRR): Arid west Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Havala sandy loam (140) NWI classification: N/A

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

Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

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

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

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes assumed No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:
Soil samples not taken, edges of wetland obvious by change in land form + vegetation

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Juncus sp.			
2. brome sp.			
3.			
4.			
5.			
6.			
7.			
8.			
	_____ = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species _____	x 1 =	_____
FACW species _____	x 2 =	_____
FAC species _____	x 3 =	_____
FACU species _____	x 4 =	_____
UPL species _____	x 5 =	_____
Column Totals: _____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No _____

Remarks:

008

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- X Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No _____

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

Remarks:

1

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: TLRR / Kern River City/County: Tehachapi / Kern Sampling Date: 4/13/17

Applicant/Owner: State: CA Sampling Point:

Investigator(s): MC, PL Section, Township, Range:

Landform (hillslope, terrace, etc.): meadow Local relief (concave, convex, none): none Slope (%): 0-2

Subregion (LRR): Lat: 35.094425 Long: -118.635471 Datum:

Soil Map Unit Name: Hanford sandy loam NWI classification:

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

Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No

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

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

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

Remarks:
no soil samples taken, hydric soils assumed "freshwater emergent wetland" NWI

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Ø			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1. Ø			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1. Juncus sp.	95	yes	OBL
2. brome sp.	5	no	
3.			
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 50 80)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum Ø % Cover of Biotic Crust Ø

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 95% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 95	x 1 = 95
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = 1

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks:
Juncus not identifiable to species, no flowering parts

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

no soil pits taken, not allowed to dig on property. Assumed hydric

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- X Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- X Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 0

Water Table Present? Yes ___ No ___ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland Hydrology Present? Yes ✓ No ___

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

0

Remarks:

agricultural area, may drain irrigation?

011 (Pond)

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: TLRR (Kern) City/County: Kern Sampling Date: 4/10/17

Applicant/Owner: State: CA Sampling Point:

Investigator(s): Paulette Laubet Section, Township, Range:

Landform (hillslope, terrace, etc.): Pond Local relief (concave, convex, none): concave Slope (%): 15%

Subregion (LRR): Arid west Lat: 35.115424 Long: -118.697799 Datum:

Soil Map Unit Name: Walong sandy loam NWI classification: None

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

Are Vegetation ____, Soil ____, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
Feature is a pond, possibly manipulated to be a water source for cattle

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus douglasii	15	yes	UP
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: ____)			
1. Bromus herbaceus (nonnative)	80	yes	UP
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	95 = Total Cover		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust Ø

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Does not met requirements of a wetland
Blue oak woodland w/ ponding in depressed area

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

no soil pit was dug, area not mapped as wetland per NWI and soils are not hydric

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ____ Depth (inches): 0

Water Table Present? Yes ____ No ____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No ____ Depth (inches): _____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

man made pond w/ in grazed area

012 (S. Side Bardach Rd)

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: TLRR/Kern City/County: Kern Sampling Date: 4/13/17

Applicant/Owner: State: CA Sampling Point:

Investigator(s): Paulette Laubet Section, Township, Range:

Landform (hillslope, terrace, etc.): grassland Local relief (concave, convex, none): concave Slope (%): 2%

Subregion (LRR): Arid West Lat: 35.094317 Long: -119635794 Datum:

Soil Map Unit Name: Havaa sandy loam NWI classification: none

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? NO Are "Normal Circumstances" present? Yes X No

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

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

Hydrophytic Vegetation Present? Yes X No

Hydric Soil Present? Assume Yes No

Wetland Hydrology Present? Yes X No

Is the Sampled Area within a Wetland? Yes X No

Remarks:
Area most likely saturated due to overflow from culverts from adjacent feature

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1. Ø			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1. Ø			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1. Schoenoplectus americanus	30	yes	obl
2. Lepidium latifolium	10	no	fac
3. Bromus sp.	50	yes	facu
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Woody Vine Stratum (Plot size:)			
1. Ø			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks:
Area disturbed by grazing and road/culvert

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ~~X~~

Remarks:

Havala soil series forms from alluvium and usually derived from granit
no soil pit dug

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- / Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- X Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- \ Biotic Crust (B12)
- X Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 0

Water Table Present? Yes ___ No ___ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): _____

Wetland Hydrology Present? Yes X No ___

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

Remarks:

Area is overflow from adjacent feature however does not meet . nessisary ~~the~~ requirements of a wetland

3 (N side Bandaca Rd.)

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: TLRP/Kern City/County: Kern Sampling Date: 4/13/17

Applicant/Owner: State: CA Sampling Point:

Investigator(s): Paulette Laubet Section, Township, Range:

Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Slope (%):

Subregion (LRR): Lat: 35.094527 Long: -118.636108 Datum:

Soil Map Unit Name: Havala sandy loam NWI classification: None

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

Are Vegetation , Soil , or Hydrology significantly disturbed? NO Are "Normal Circumstances" present? Yes X No

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

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

Hydrophytic Vegetation Present? Yes X No

Hydric Soil Present? Assume Yes No X

Wetland Hydrology Present? Yes X No

Is the Sampled Area within a Wetland? Yes X No

Remarks:
South of feature 0012, also most likely overflow from features 014 and 015 (freshwater wetland) flow across street allowed by culverts

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1. Ø			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1. Ø			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1. Schoenoplectus americanus	50	yes	obl
2. Lepidium latifolium	5		fac
3. Bromus sp.	30		facup
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Woody Vine Stratum (Plot size:)			
1. Ø			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum % Cover of Biotic Crust

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

__ Prevalence Index is ≤3.0[1]

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks:

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Area does not contain hydric soils, no pit was dug

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No _____ Depth (inches): 0

Water Table Present? Yes X No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): _____

Wetland Hydrology Present? Yes X No _____

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

Remarks:

area manipulated by culverts and road drainages

pooling in depressed area

0014 (south of Banducci Rd

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: TLRP/Kern City/County: Tehachapi/Kern Sampling Date: 4/13/17

Applicant/Owner: State: Sampling Point:

Investigator(s): Paulette Labet Section, Township, Range:

Landform (hillslope, terrace, etc.): grassland Local relief (concave, convex, none): concave Slope (%): 2%

Subregion (LRR): Arid West Lat: 35.094425 Long: -118.635471 Datum:

Soil Map Unit Name: Havala sandy loam NWI classification: PEMC

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

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? NO Are "Normal Circumstances" present? Yes _____ No _____

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

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

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present? Assumed	Yes _____ No X	
Wetland Hydrology Present?	Yes X No _____	

Remarks:
Palustrine emergent wetland

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)			
1. Ø			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Ø			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Schoenoplectus americanus	40	yes	OBL
2. Bromus sp.	20	yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
	60 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1. Ø			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:
wet meadow, grazing area w/ drainage

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

No soil pit dug, area classified as a freshwater emergent wetland, however does not contain hydric soils

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- X Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No _____ Depth (inches): 0

Water Table Present? Yes X No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): _____

Wetland Hydrology Present? Yes X No _____

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

Remarks:

Area is seasonally flooded, culvert flows under road

0015 (N of Banducci Rd)

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: TLRR/Kern City/County: Tehachapi/Kern Sampling Date: 4/13/17

Applicant/Owner: State: CA Sampling Point:

Investigator(s): Paulette Laubet Section, Township, Range:

Landform (hillslope, terrace, etc.): meadow/pasture Local relief (concave, convex, none): concave Slope (%): 2%

Subregion (LRR): Lat: 35.094425 Long: -118.635467 Datum:

Soil Map Unit Name: Havaka sandy loam NWI classification: PEMIC

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes ____	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
Freshwater Emergent Wetland, seasonally flooded

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: ____)			
1. Schoenoplectus americanus	75	yes	obl
2. Lepidium latifolium	15	y	FAC
3. bromus sp.			up
4.			
5.			
6.			
7.			
8.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1. Ø			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species ____	x 1 =	____
FACW species ____	x 2 =	____
FAC species ____	x 3 =	____
FACU species ____	x 4 =	____
UPL species ____	x 5 =	____
Column Totals: ____ (A)		____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

assumed hydric

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ✓ No ____ Depth (inches): 2

Water Table Present? Yes ____ No ____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No ____ Depth (inches): 0-12

Wetland Hydrology Present? Yes X No _____

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

Remarks:

Banduchi Rd
0016 (pond/cottonwoods)

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: TLRR/Kern City/County: Kern/Tehachapi Sampling Date: 4/13/17

Applicant/Owner: State: CA Sampling Point:

Investigator(s): Danielle Laubet Section, Township, Range:

Landform (hillslope, terrace, etc.): grassland Local relief (concave, convex, none): none Slope (%): N/A

Subregion (LRR): Arid West Lat: 35.094253 Long: -118.611491 Datum:

Soil Map Unit Name: Tehachapi sandy loam NWI classification: none

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

Are Vegetation , Soil , or Hydrology significantly disturbed? NO Are "Normal Circumstances" present? Yes X No

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

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

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

Remarks:
man made pond w/ planted cottonwood trees

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus fremontii	10	yes	FAC
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1. Bromus	80	yes	UP
2. Typha sp.	5	yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
	95 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust Ø

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

__ Prevalence Index is ≤3.0[1]

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks:
Area is manipulated, cottonwoods may have been planted

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

no soil pit was dug, area not deemed wetland on NWI or does it contain hydric soils per the wed soil survey

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No _____ Depth (inches): 0

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes X No _____

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

Remarks:

area has ponded water and some hydric veg but not a true wetland

ATTACHMENT E

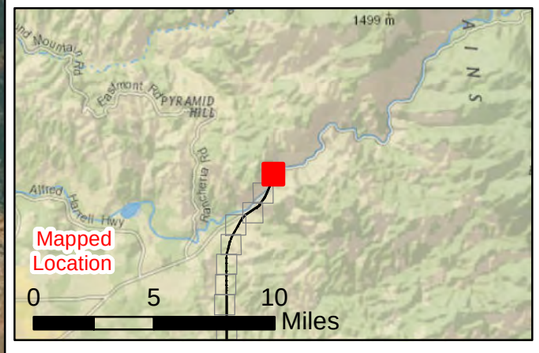
USACE Jurisdictional Waters Mapping

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Substation Location
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

FIGURESET
1 of 44

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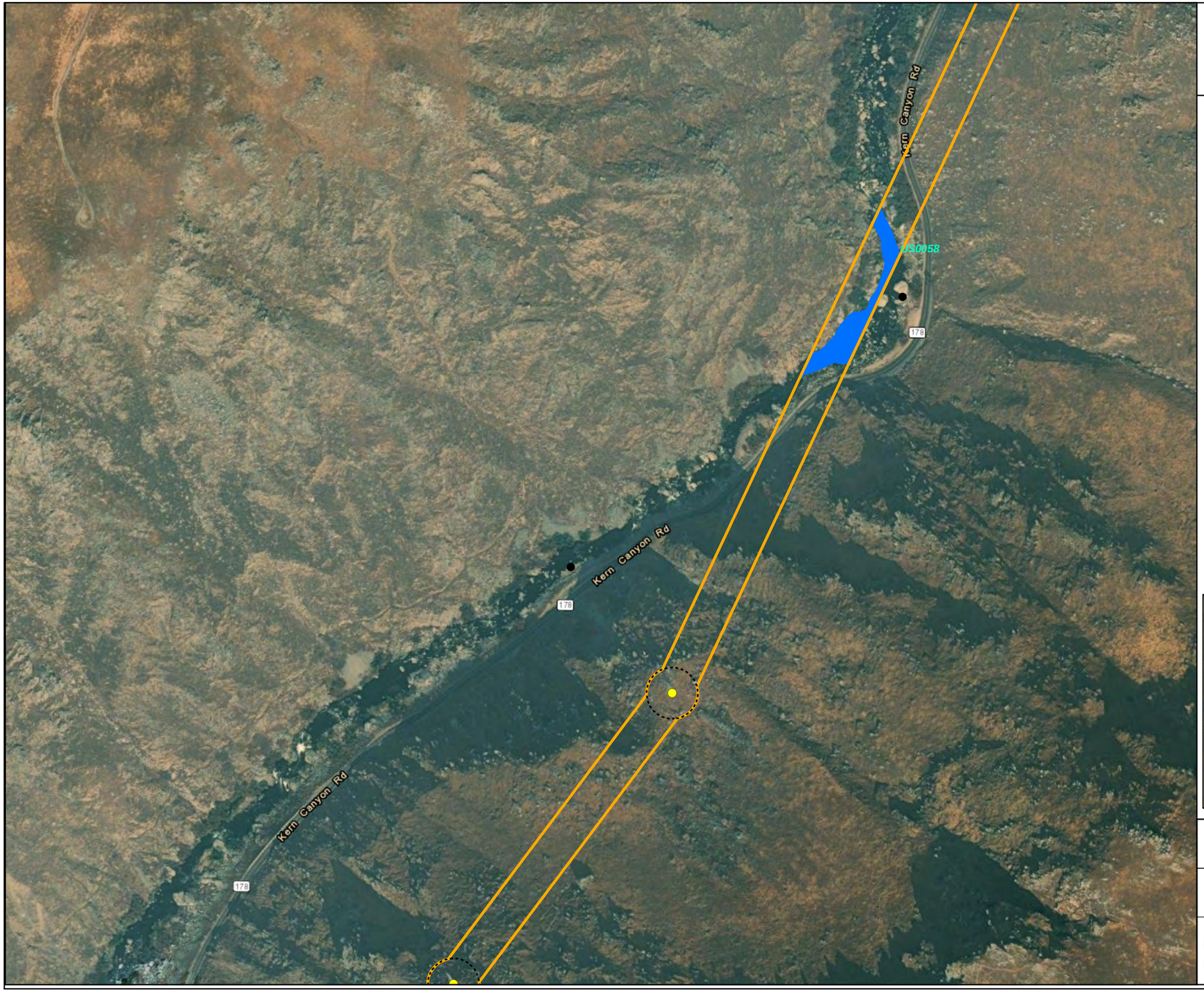
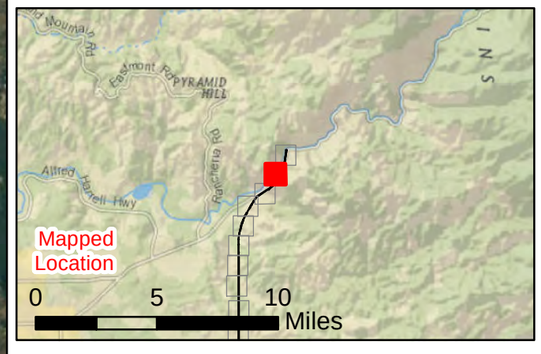


SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

FIGURESET
2 of 44

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Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
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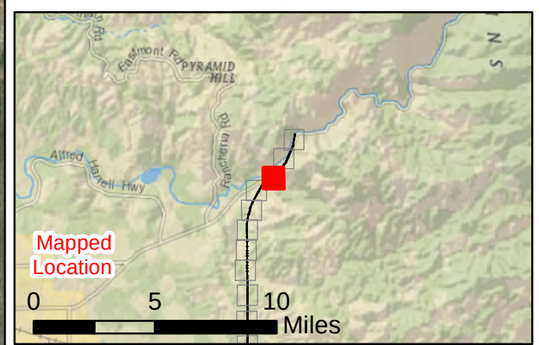
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

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FIGURESET
3 of 44

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SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

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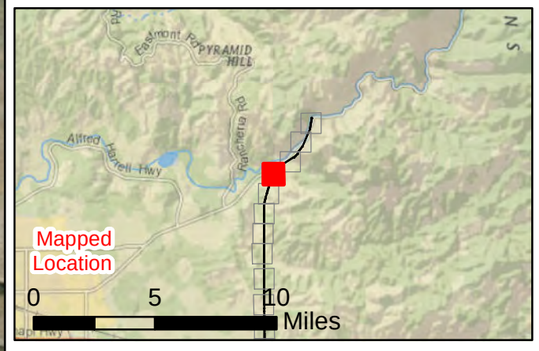
0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

FIGURESET
4 of 44

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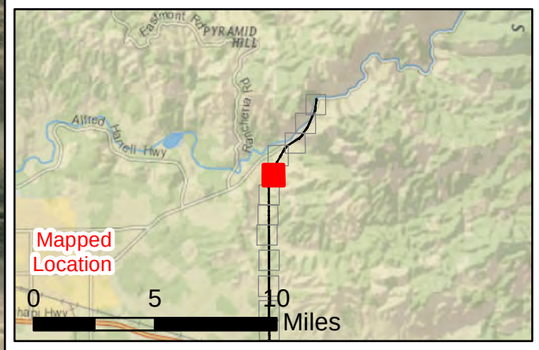
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

FIGURESET
5 of 44

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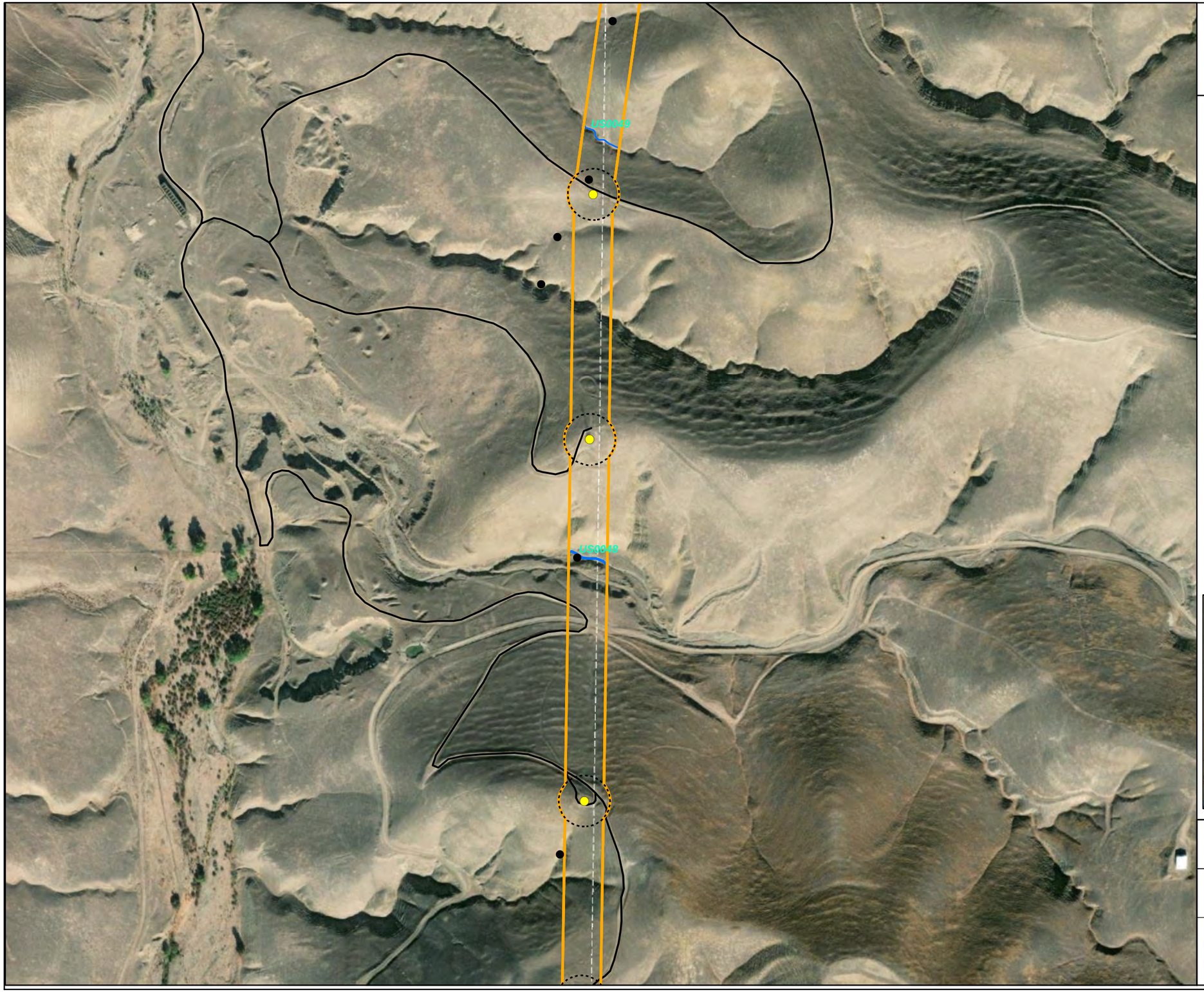

SOUTHERN CALIFORNIA EDISON
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Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
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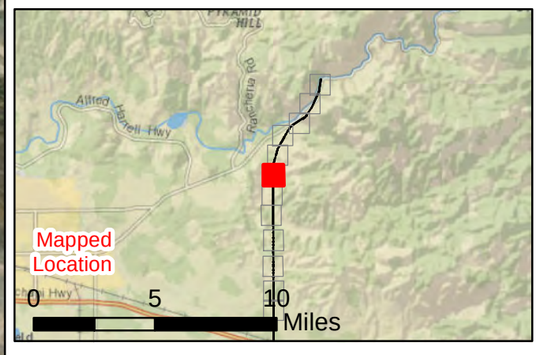
0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

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FIGURESET
6 of 44

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SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
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- Survey Area
- 100 Foot Radius Tower Buffer
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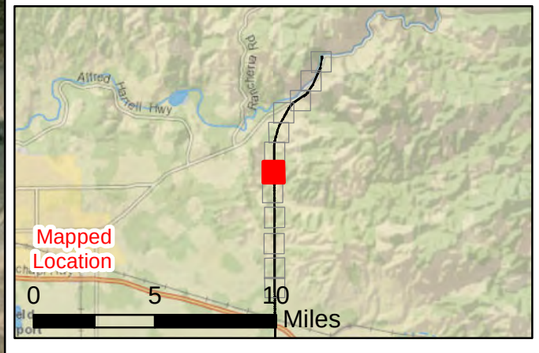
0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

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FIGURESET
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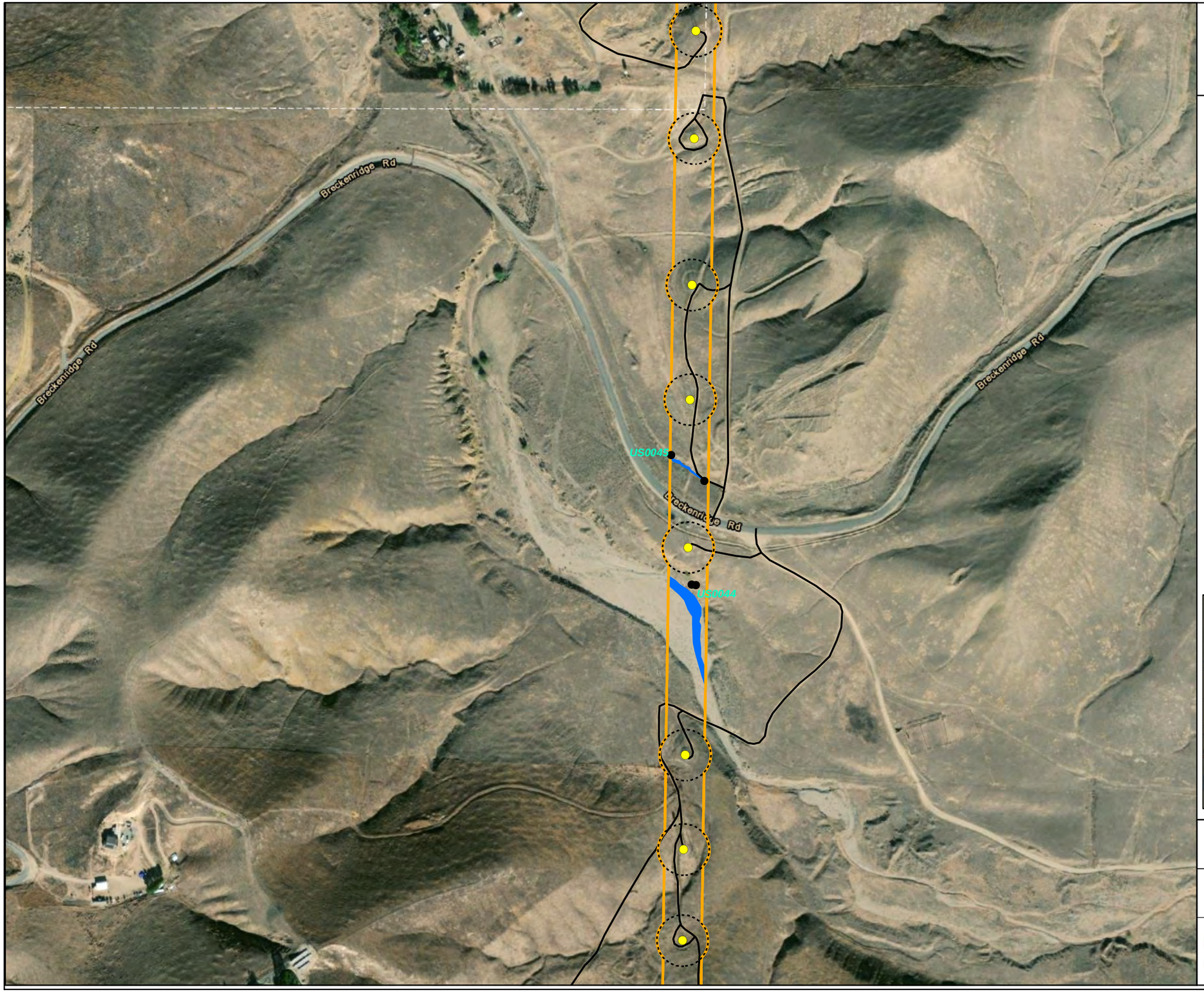

SOUTHERN CALIFORNIA EDISON
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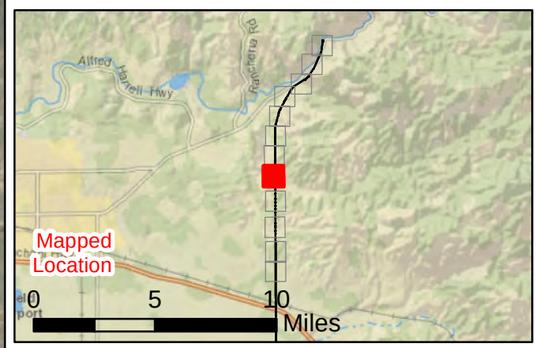
Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

FIGURESET
8 of 44

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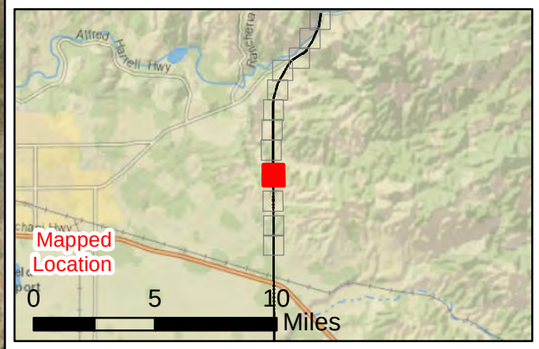
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

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FIGURESET
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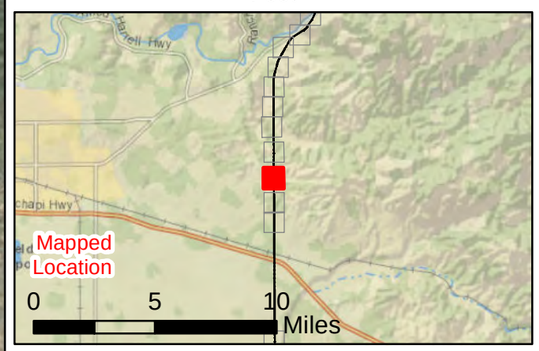
SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

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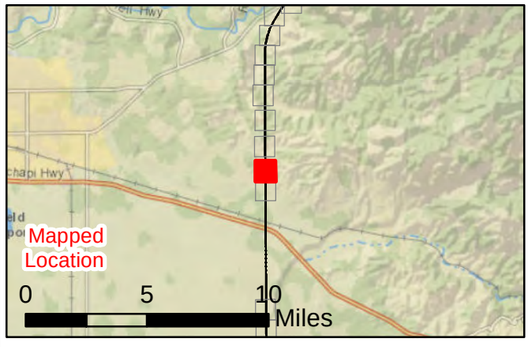
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

FIGURESET
11 of 44

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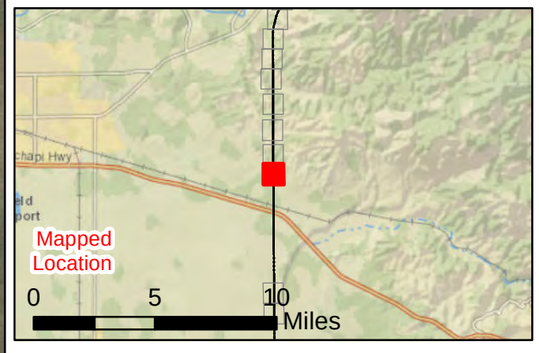
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

FIGURESET
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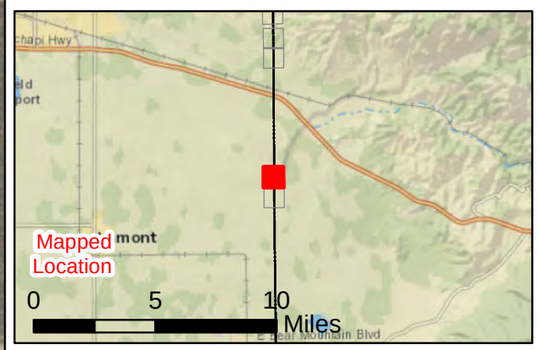
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

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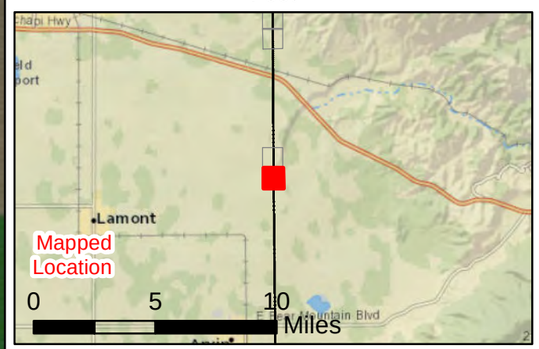
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

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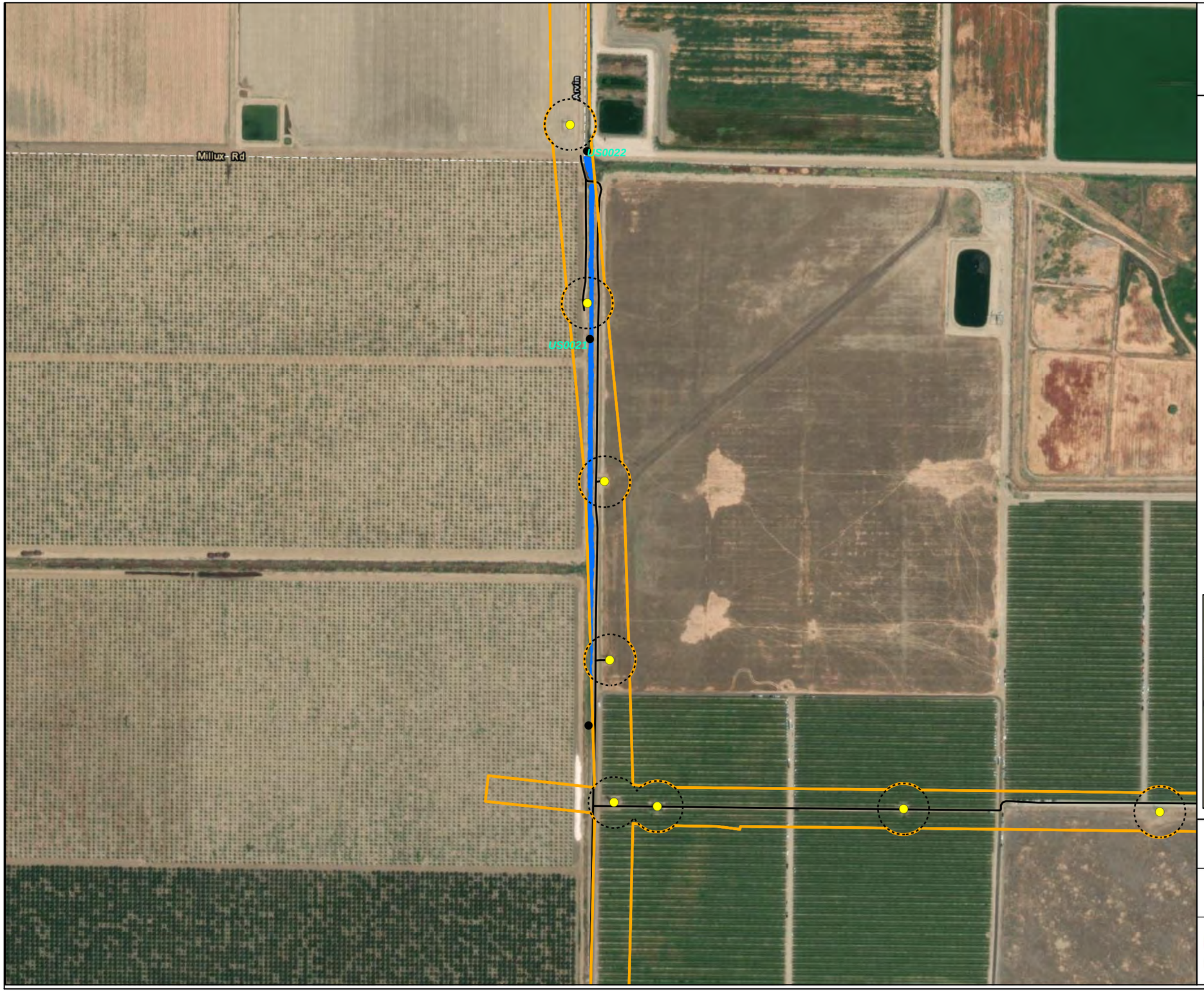
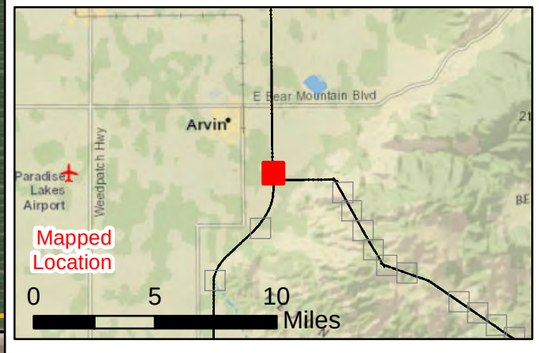


SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

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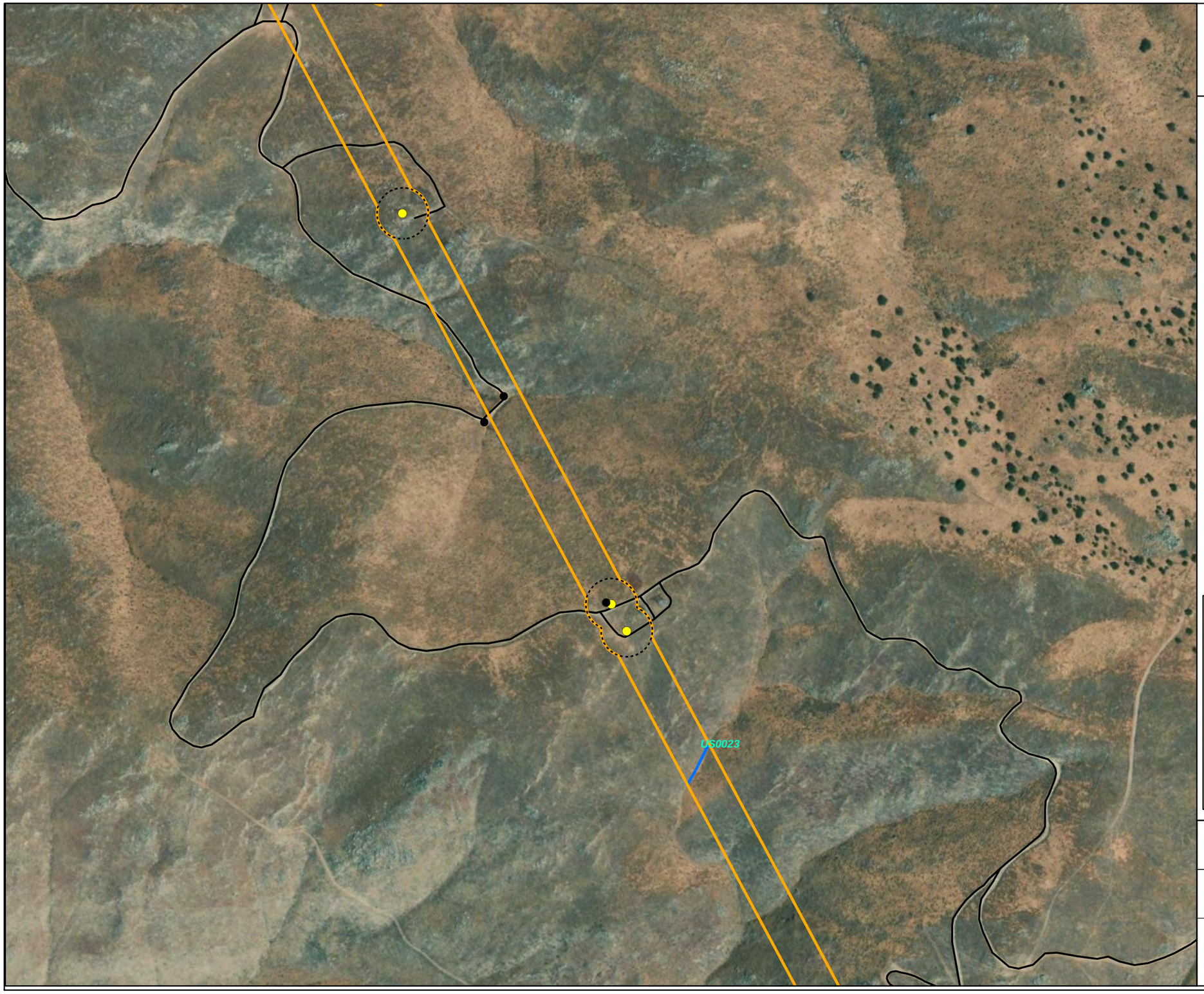
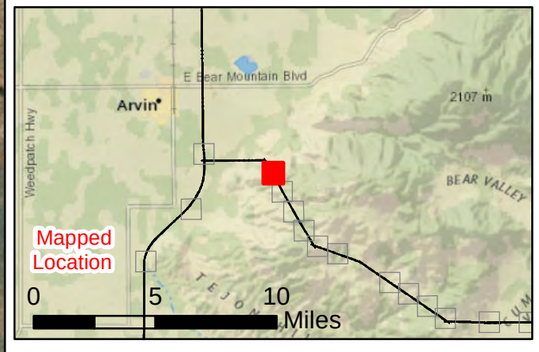


SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

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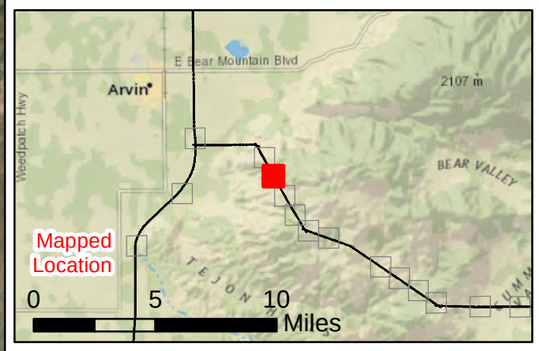
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

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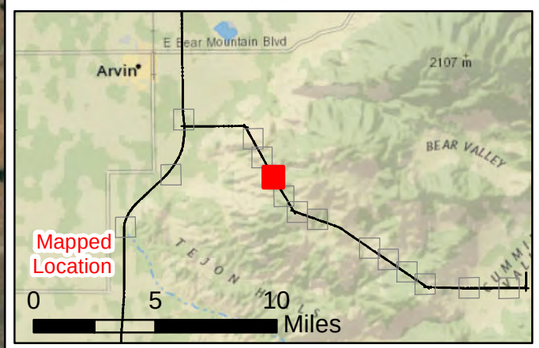
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

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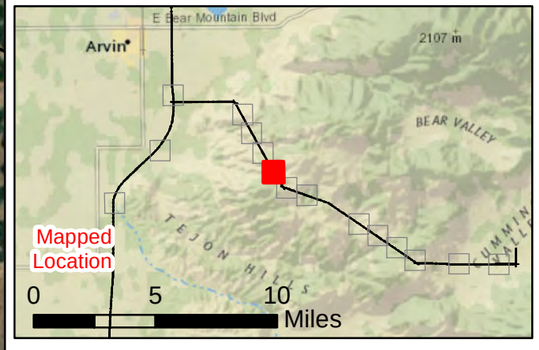
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

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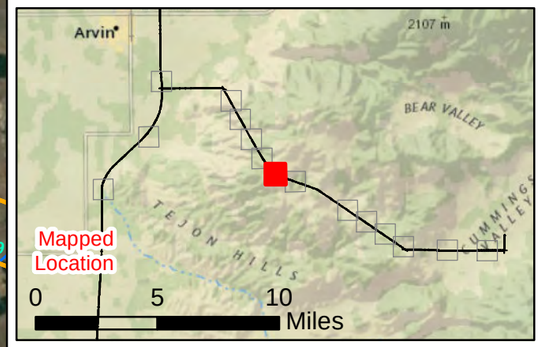
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

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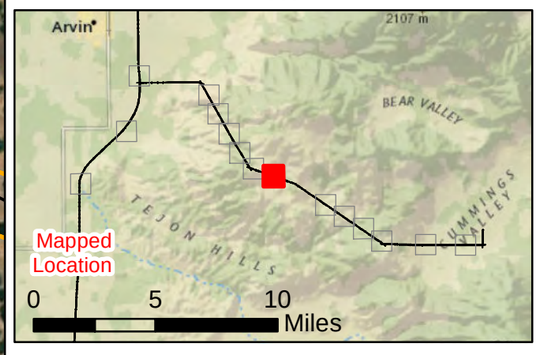
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

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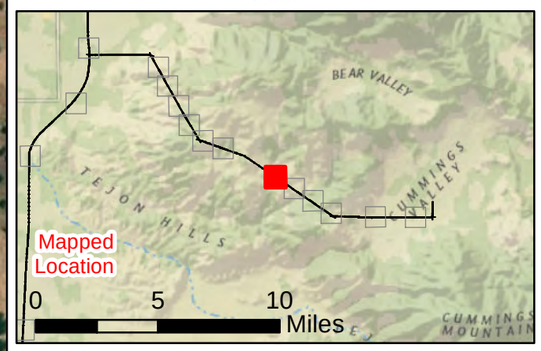
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters
- USACE/RWQCB Wetland Waters
- Wetland Sample Location

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

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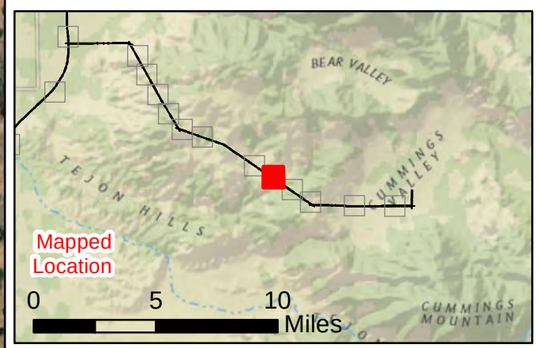
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

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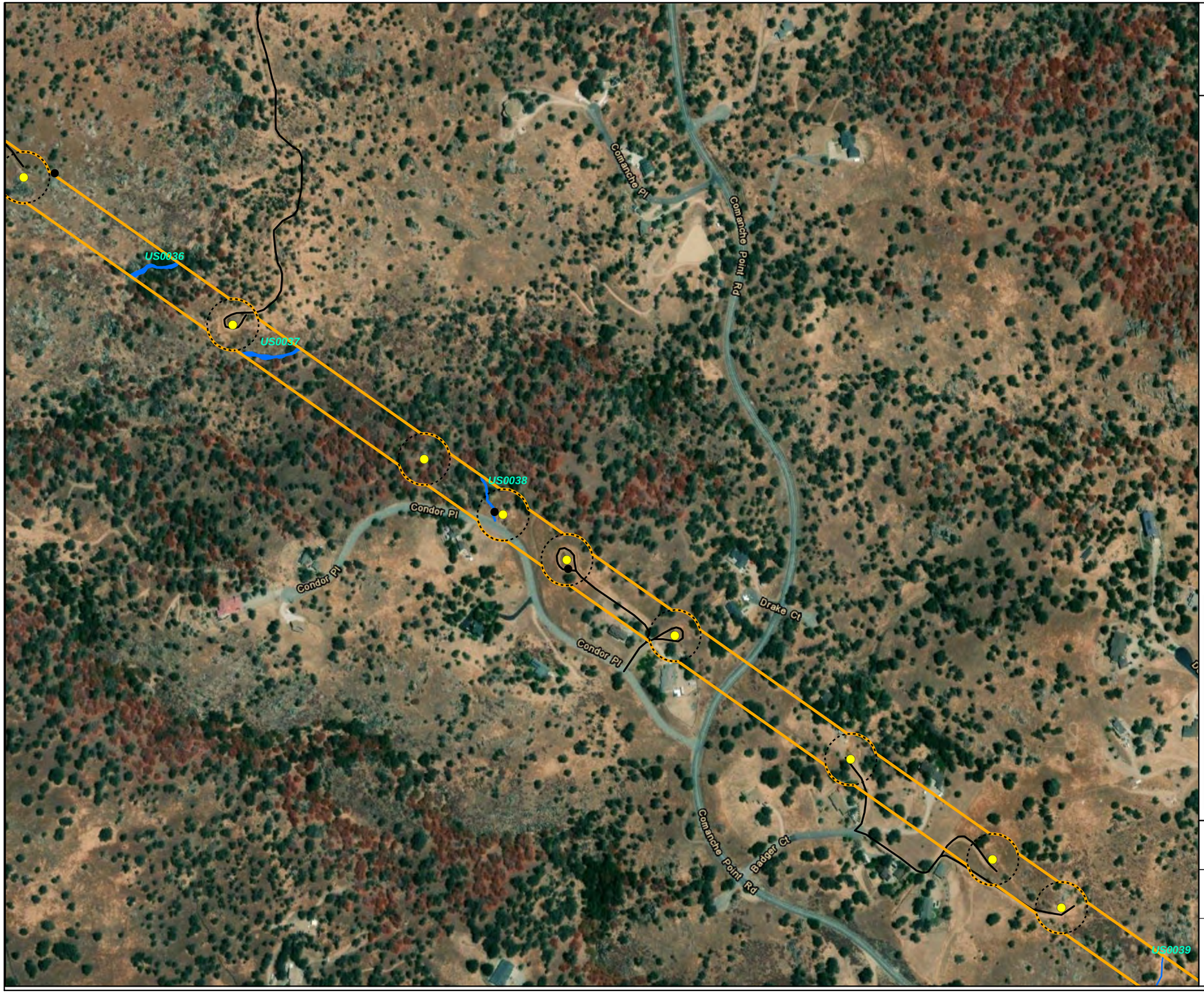
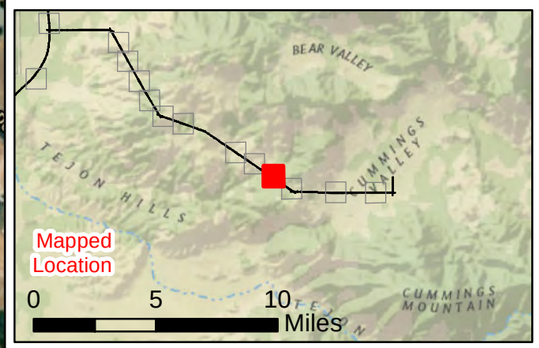


SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

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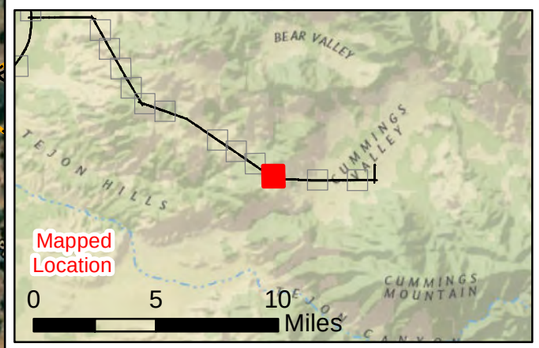
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

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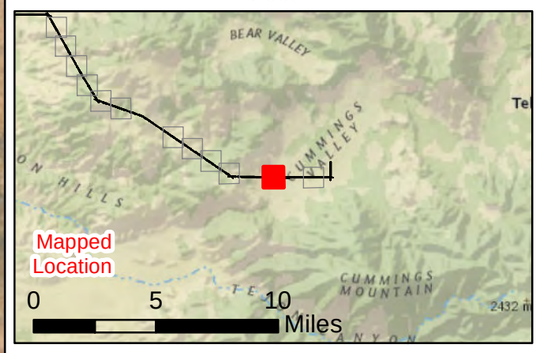
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Wetland Waters
- Wetland Sample Location

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

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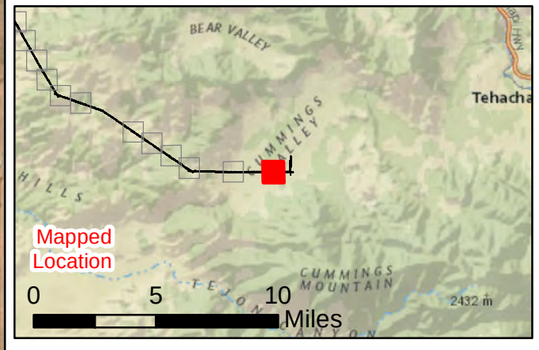
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Wetland Waters
- Wetland Sample Location

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

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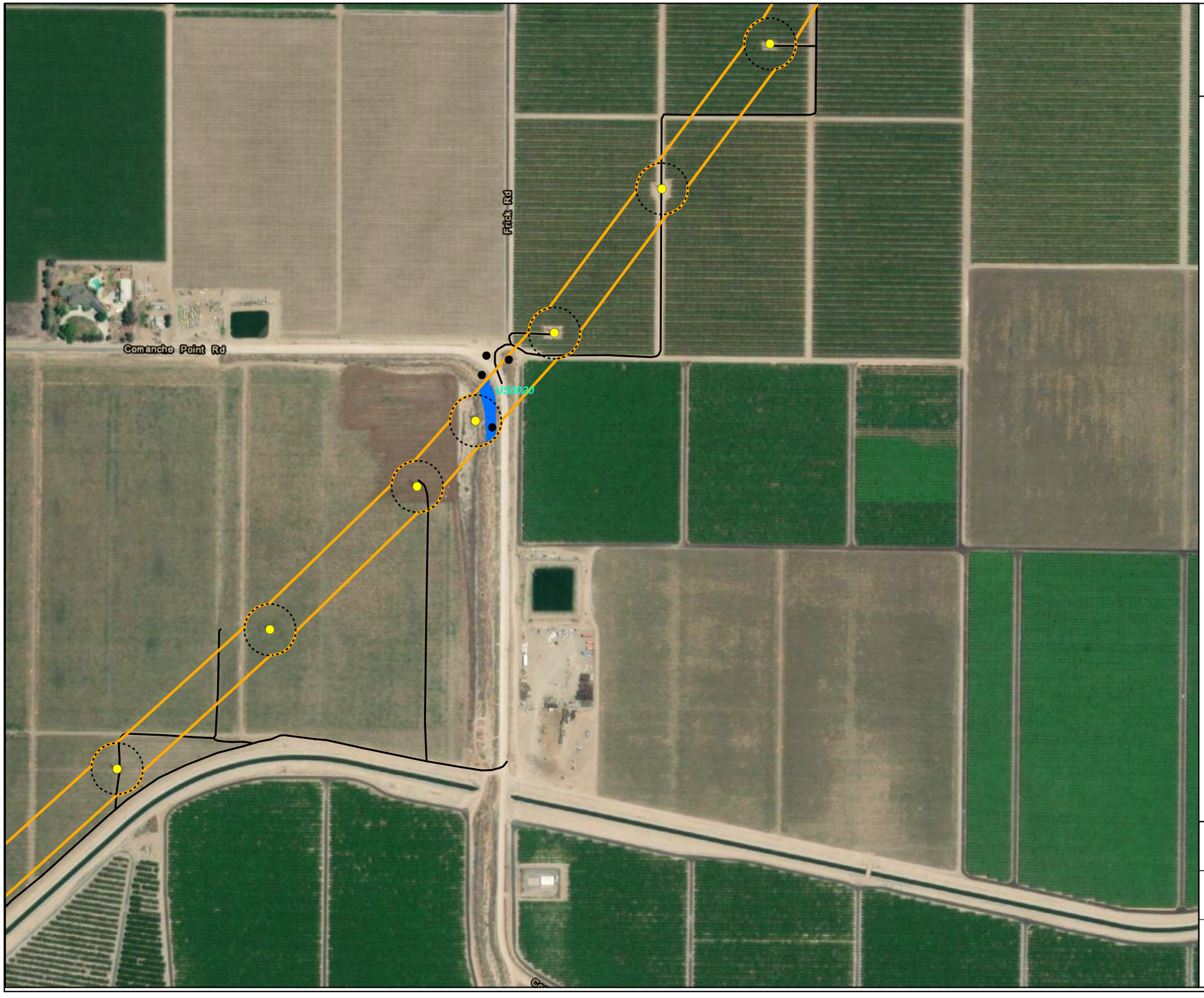
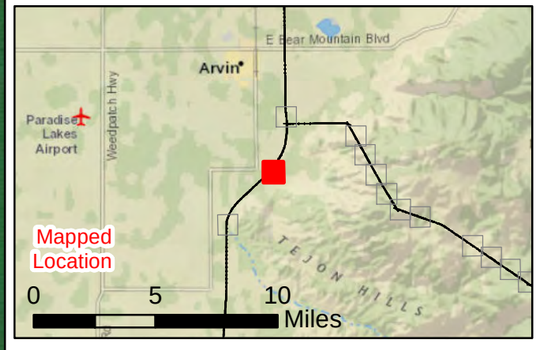


SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

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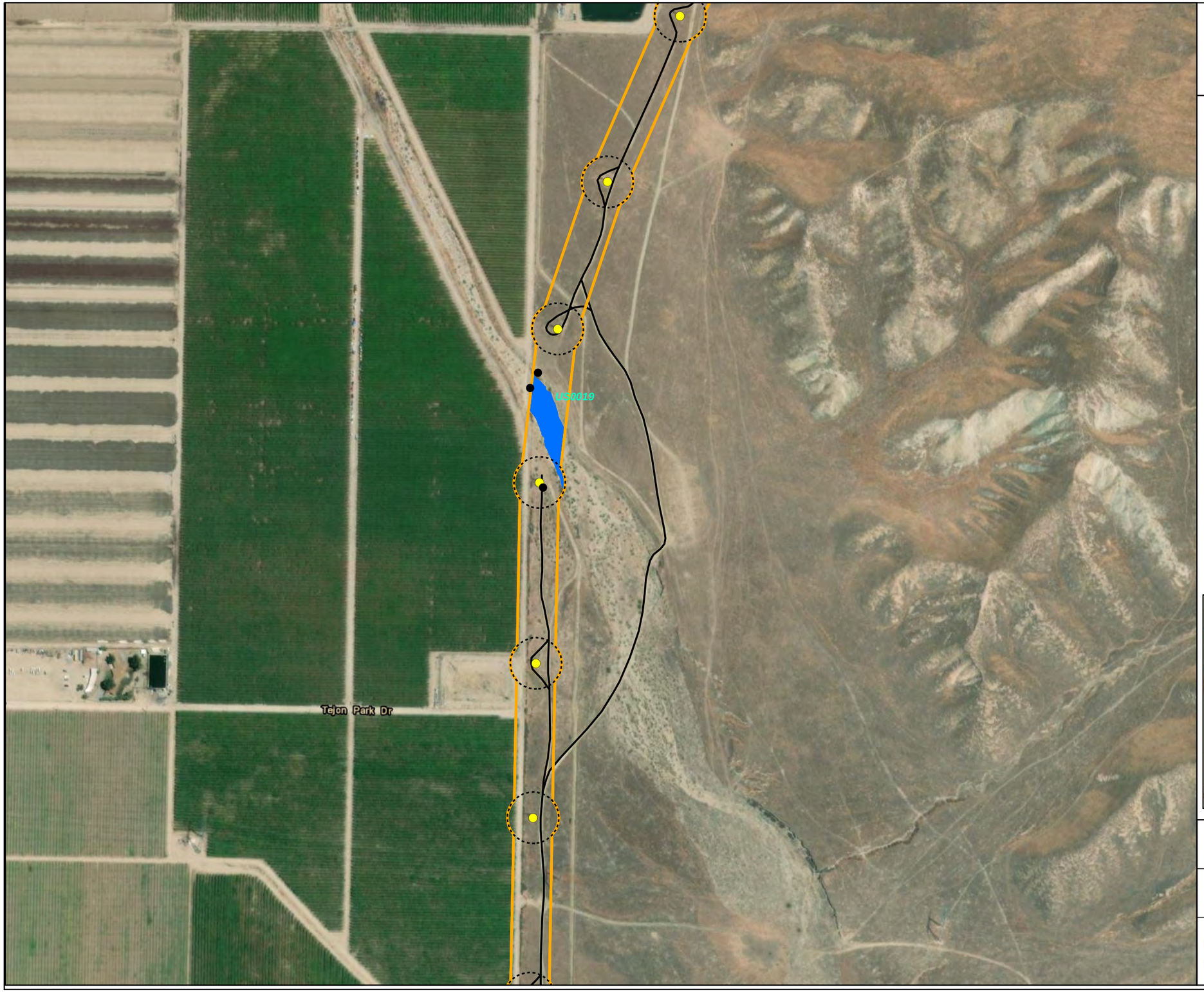

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
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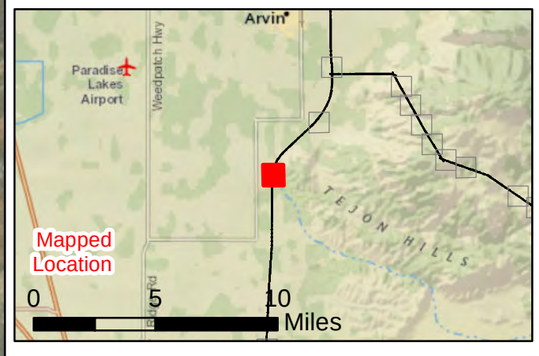
- USACE/RWQCB Other Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

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SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

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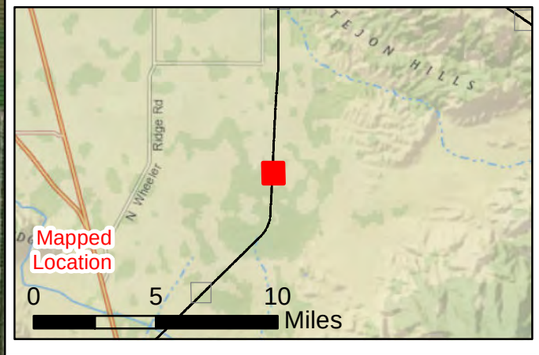
0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

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SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

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- Survey Area
- 100 Foot Radius Tower Buffer
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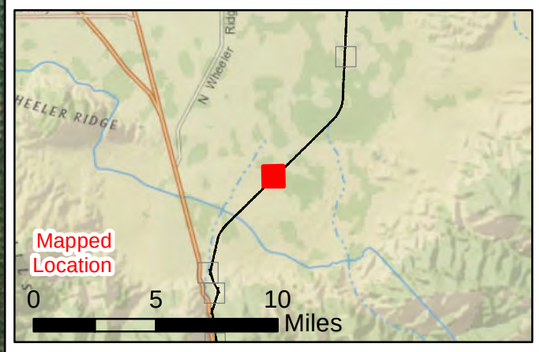
0 500 1,000
Feet



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SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

N

Legend

- Structure Location
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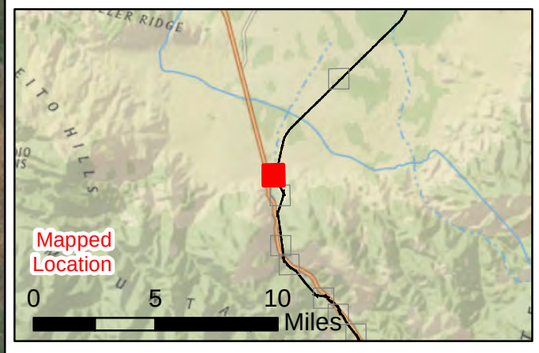
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

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SOUTHERN CALIFORNIA EDISON®
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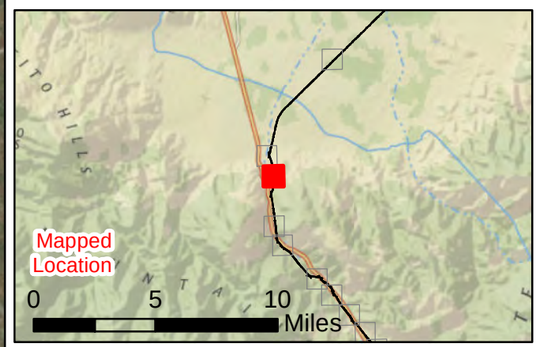
Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters
- USACE/RWQCB Wetland Waters
- Wetland Sample Location

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

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SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

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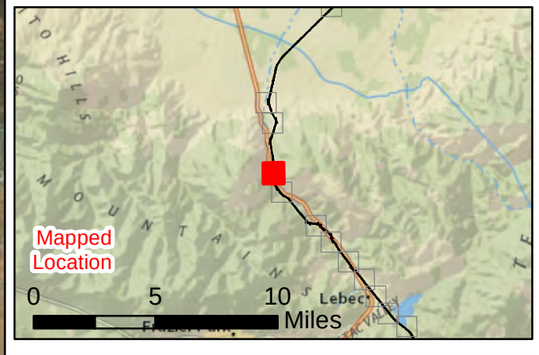
0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

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SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
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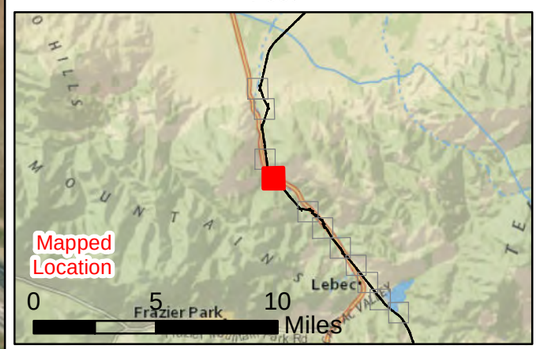
0 500 1,000
Feet



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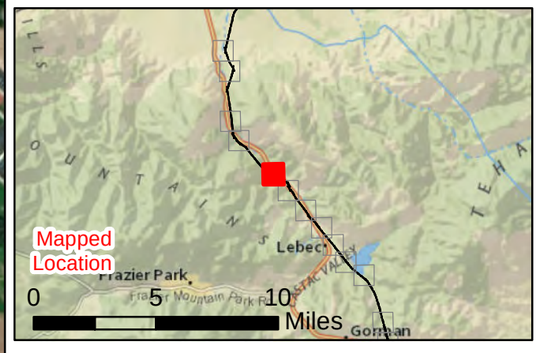
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters
- USACE/RWQCB Wetland Waters
- Wetland Sample Location

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

FIGURESET
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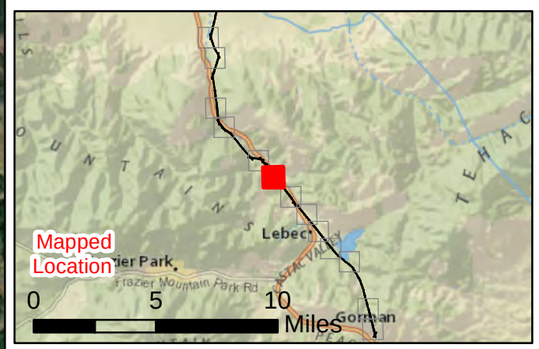
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

FIGURESET
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Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
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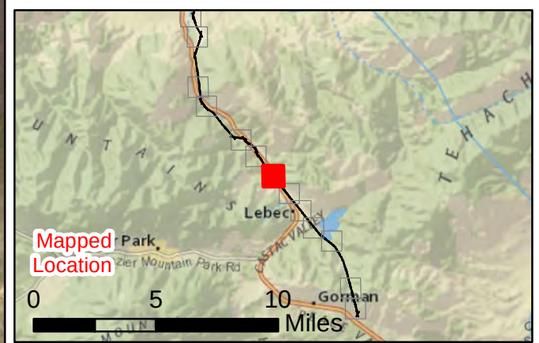
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters
- USACE/RWQCB Wetland Waters
- Wetland Sample Location

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

FIGURESET
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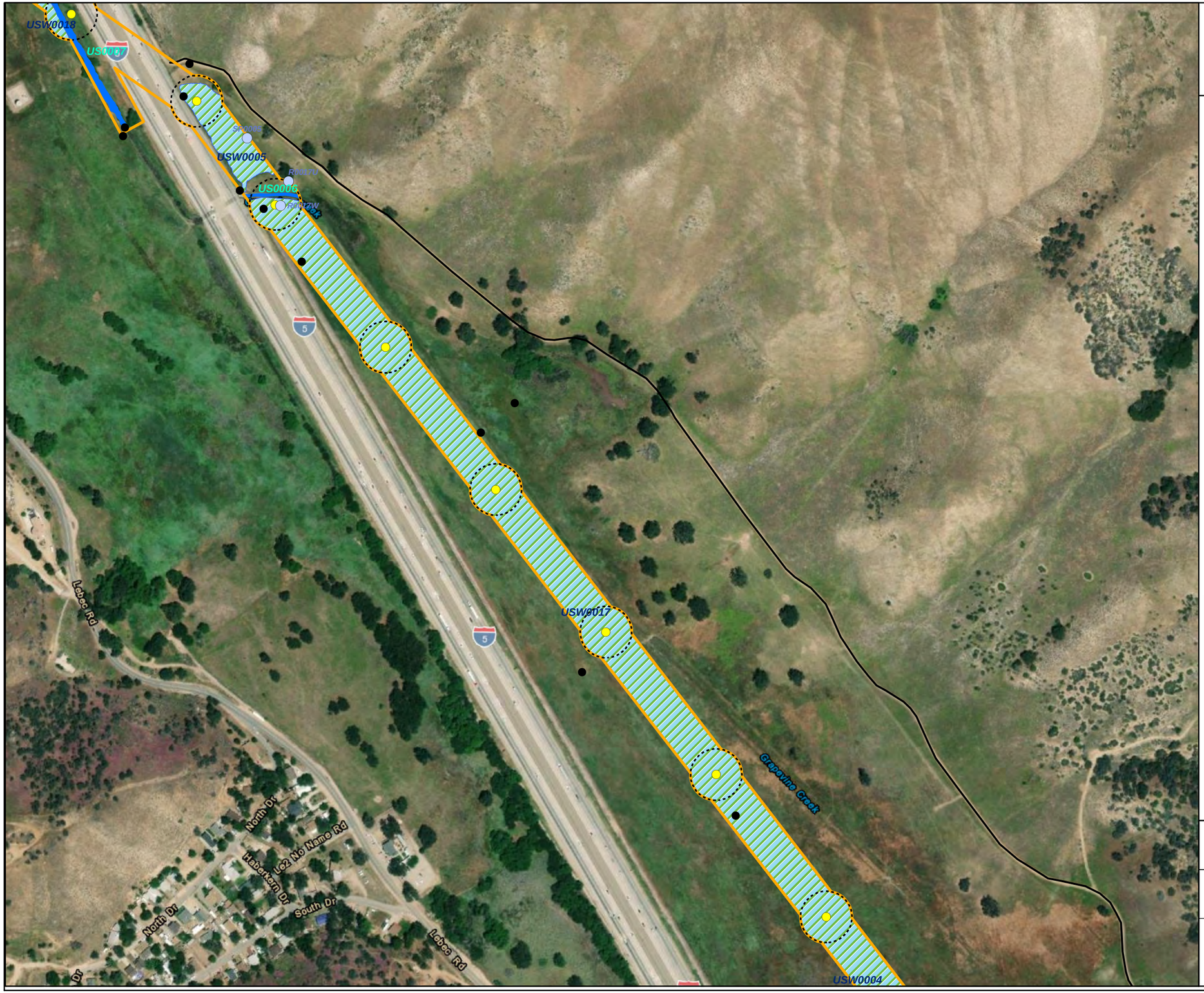
Coordinate System: NAD 1983 UTM Zone 11N

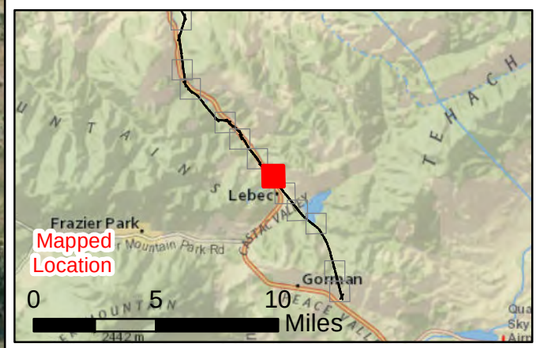


SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters
- USACE/RWQCB Wetland Waters
- Wetland Sample Location

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

FIGURESET
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Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
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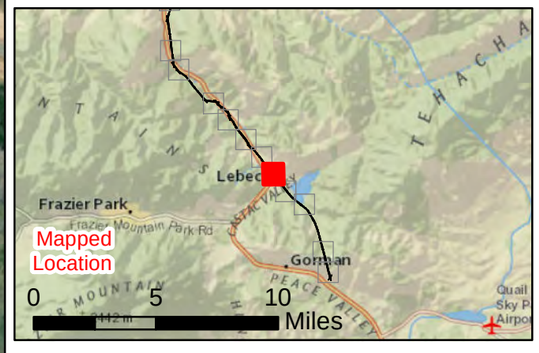
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Wetland Waters
- Wetland Sample Location

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

FIGURESET
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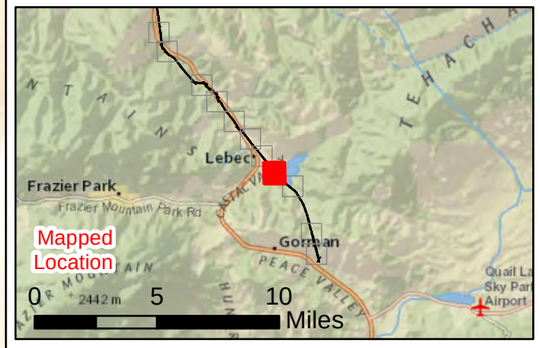
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters
- USACE/RWQCB Wetland Waters
- Wetland Sample Location

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

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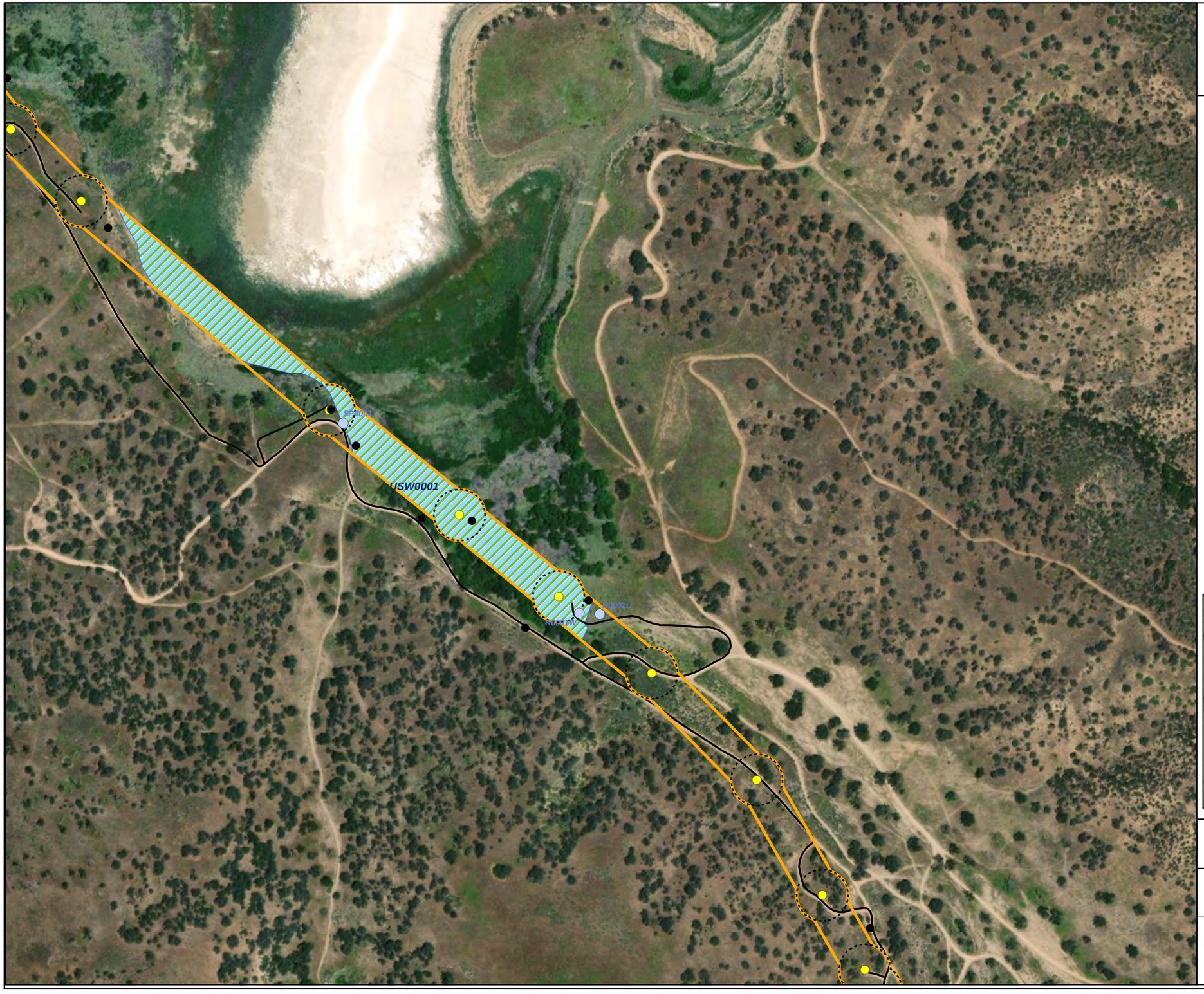
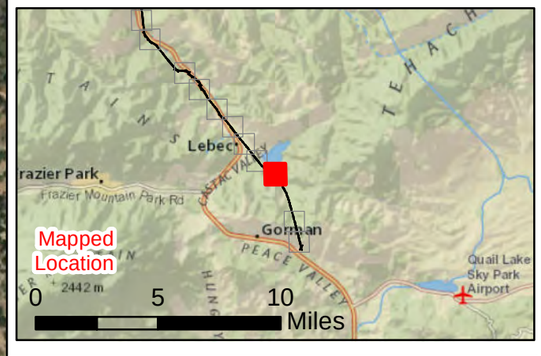


SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Wetland Waters
- Wetland Sample Location

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

FIGURESET
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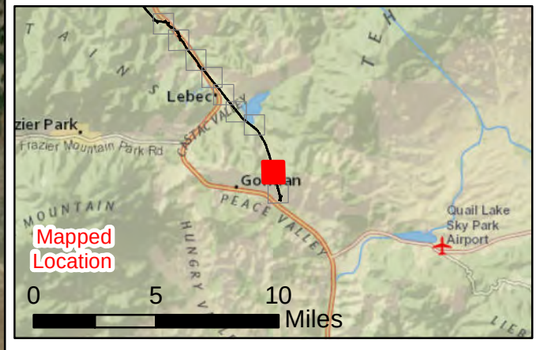
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

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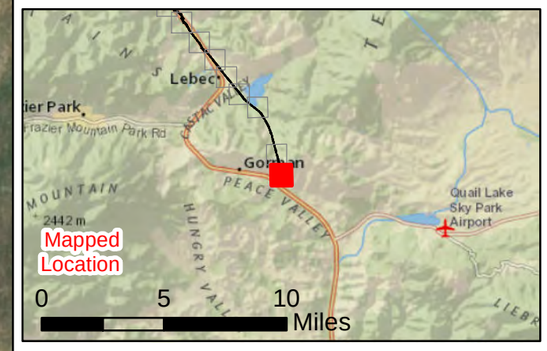
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Substation Location
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Other Waters
- USACE/RWQCB Wetland Waters
- Wetland Sample Location

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

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44 of 44

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Coordinate System: NAD 1983 UTM Zone 11N

ATTACHMENT F

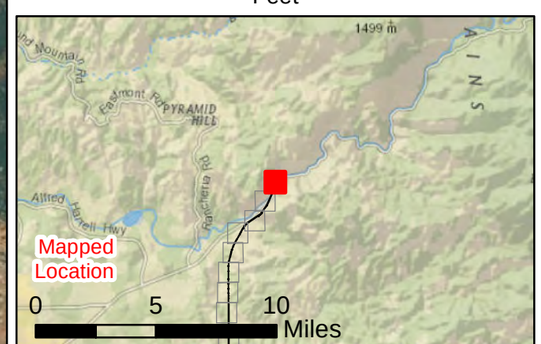
CDFW Jurisdictional Waters Mapping

SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company

Legend

- Structure Location
- Photo Locations
- Substation Location
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

FIGURESET
1 of 44

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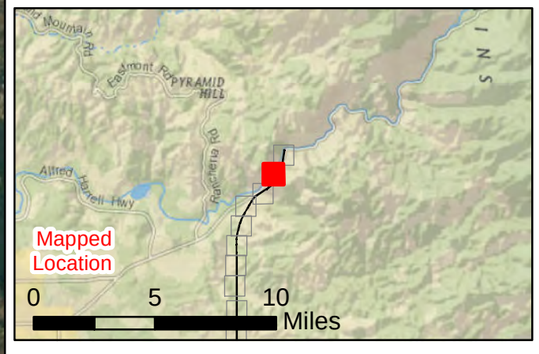
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

FIGURESET
2 of 44

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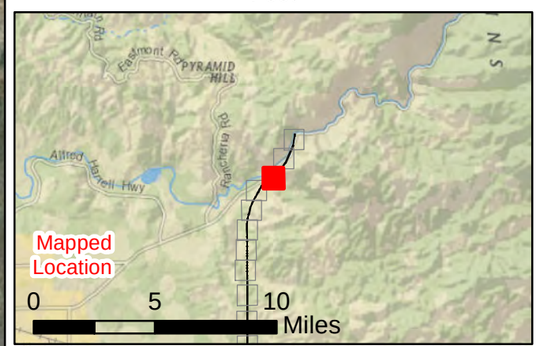
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

FIGURESET
3 of 44

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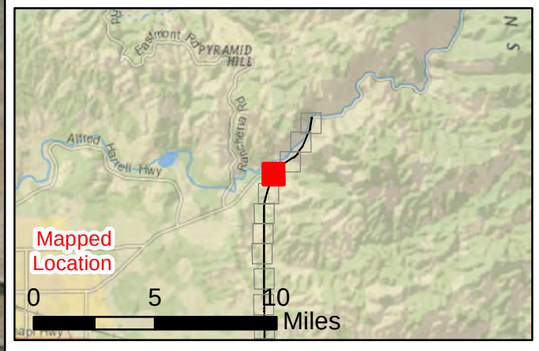
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

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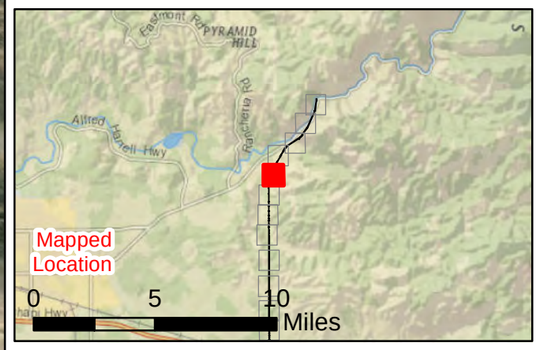
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

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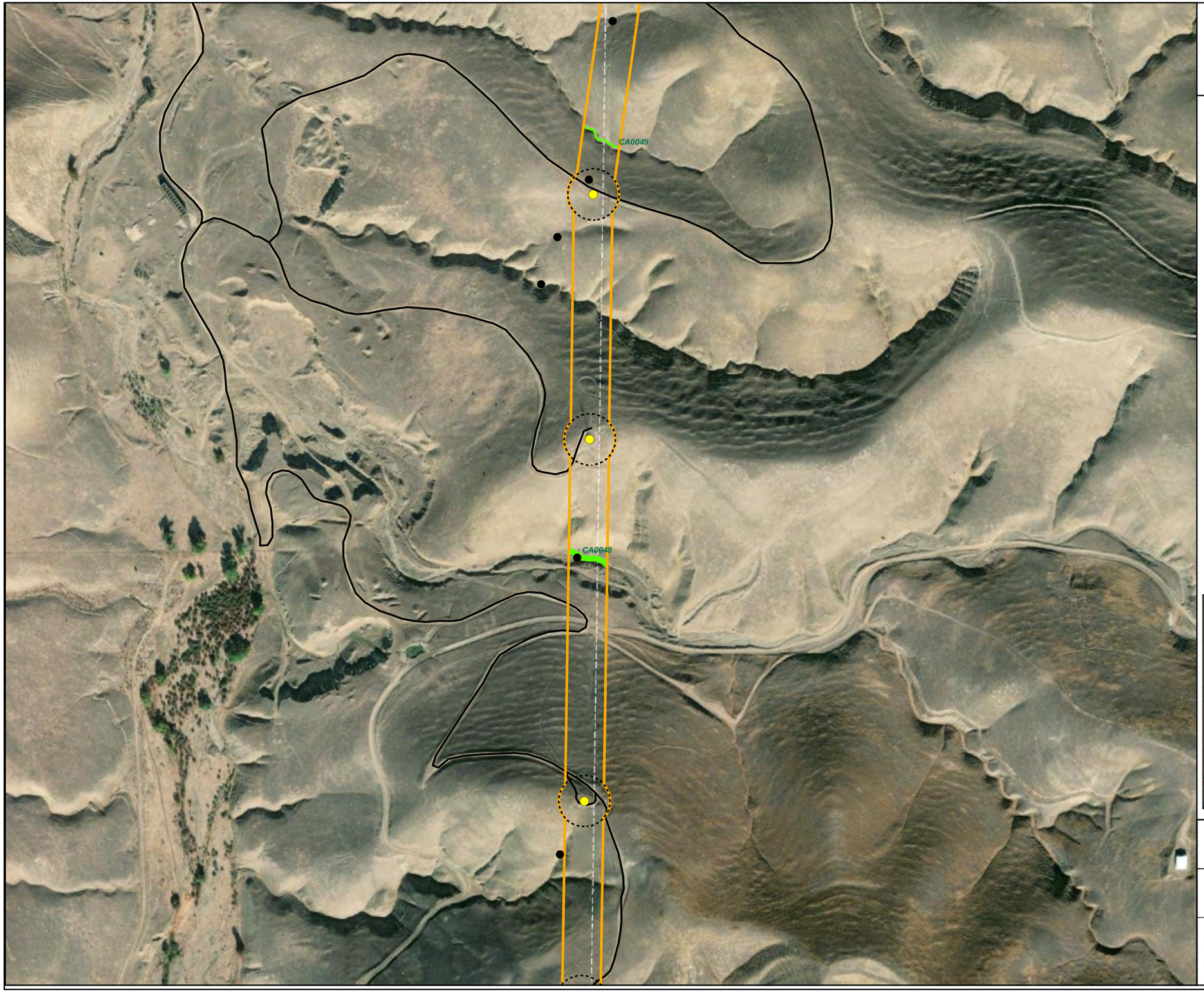
Coordinate System: NAD 1983 UTM Zone 11N

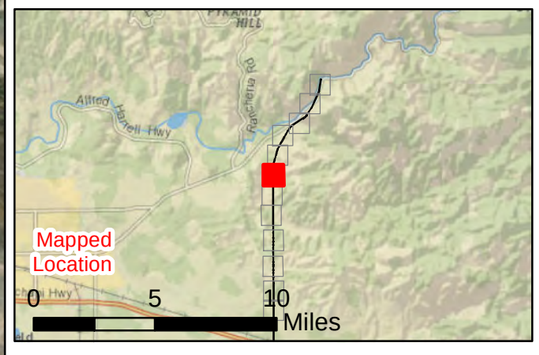


SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

FIGURESET
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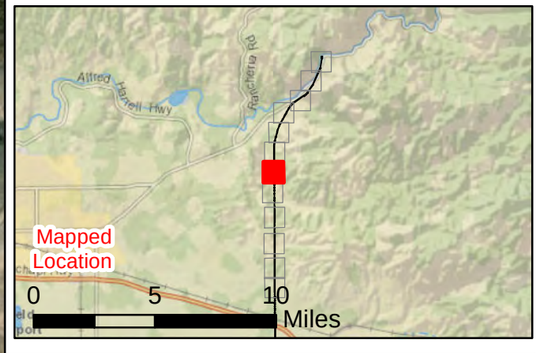
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

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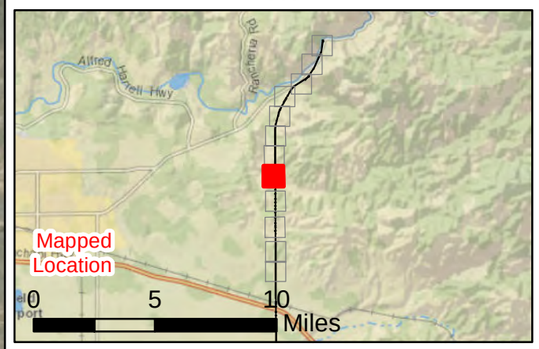
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

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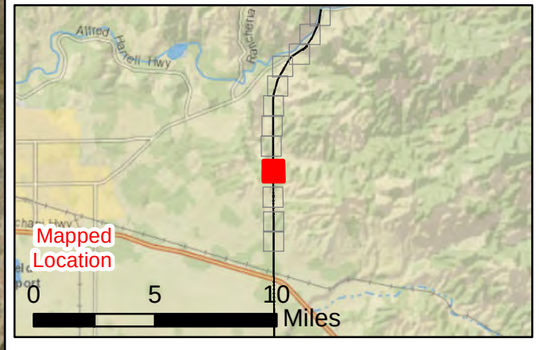
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

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SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Access Roads
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0 500 1,000
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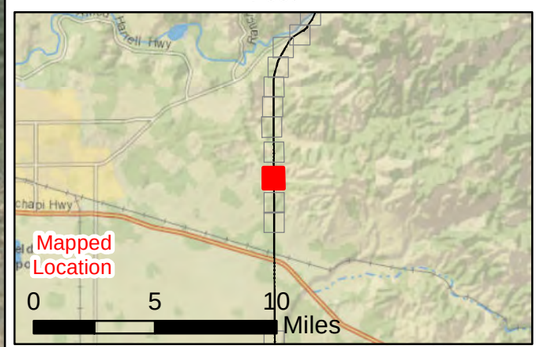

GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

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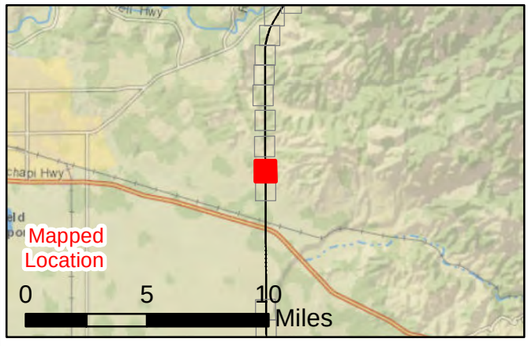
SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

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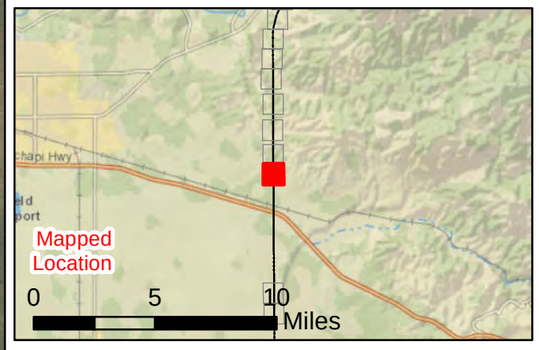
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

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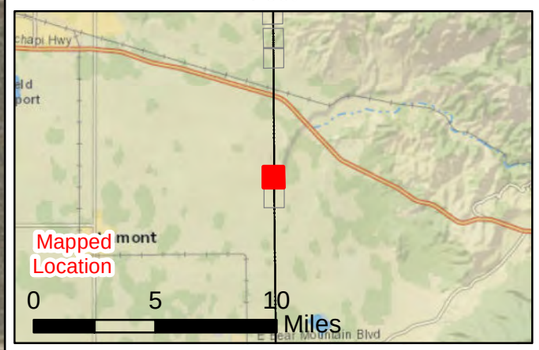
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

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13 of 44

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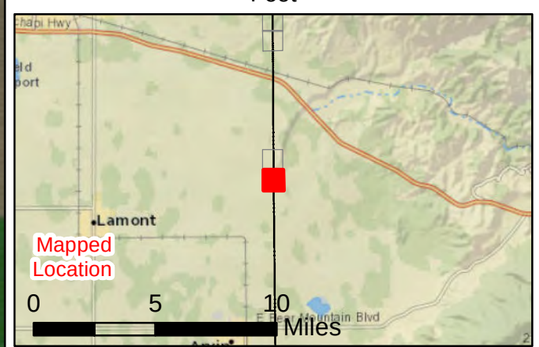
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

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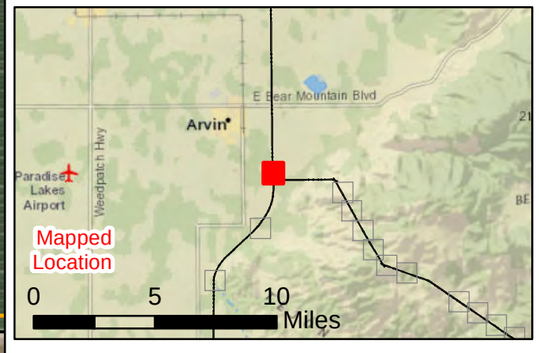
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

FIGURESET
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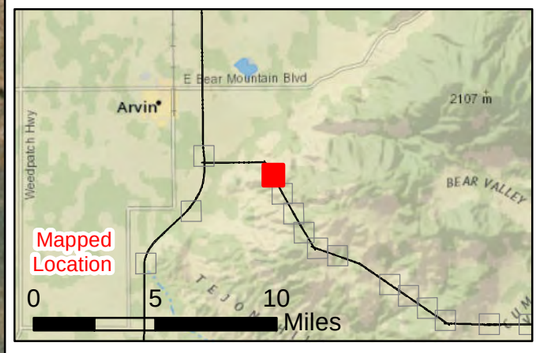
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

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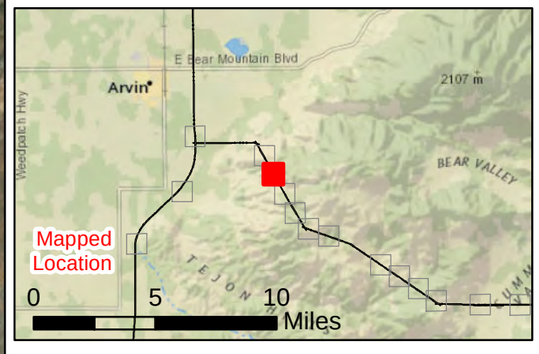
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

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Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
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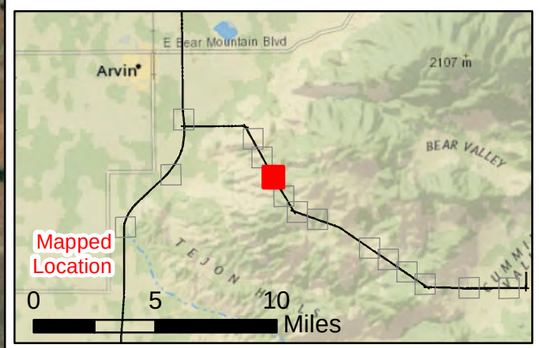
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

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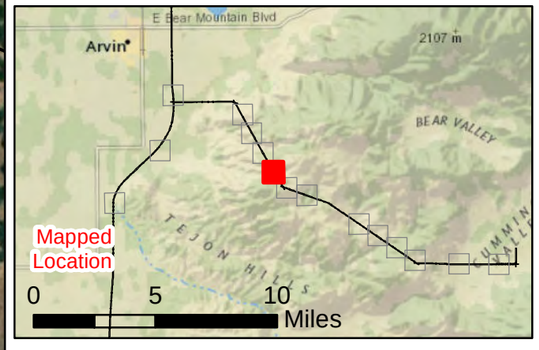
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

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Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
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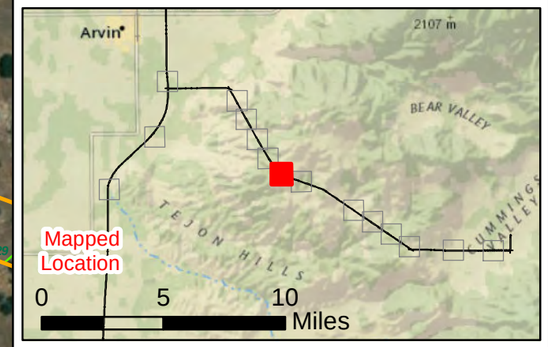
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

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Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
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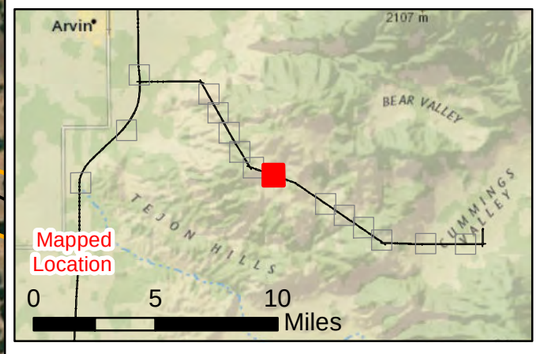
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

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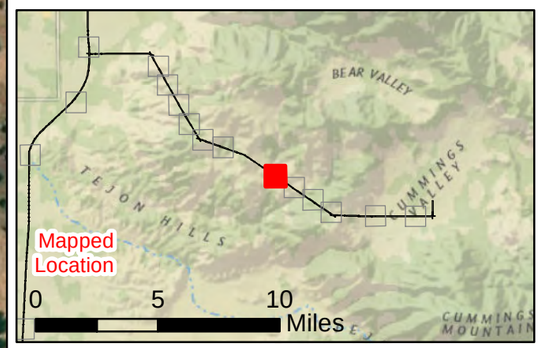
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters
- USACE/RWQCB Wetland Waters
- Wetland Sample Location

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

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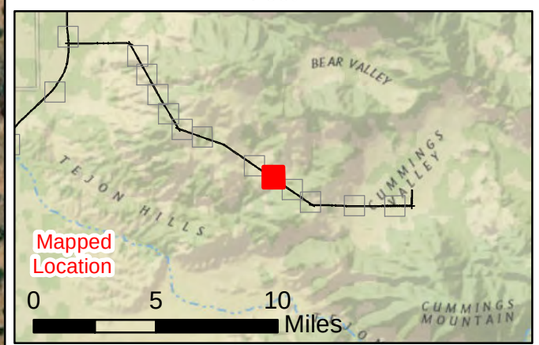
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

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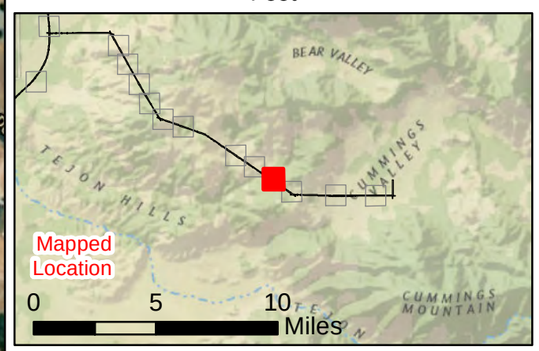
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

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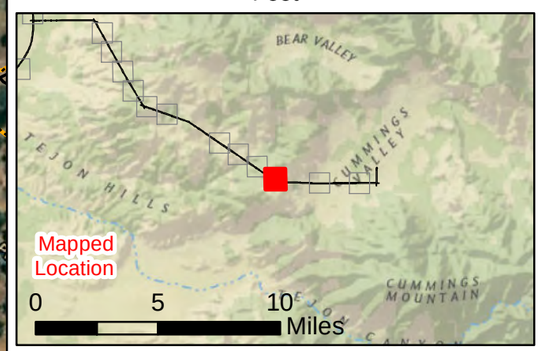
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

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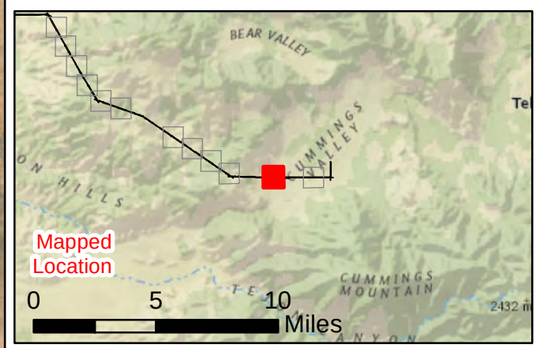
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Wetland Waters
- Wetland Sample Location

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

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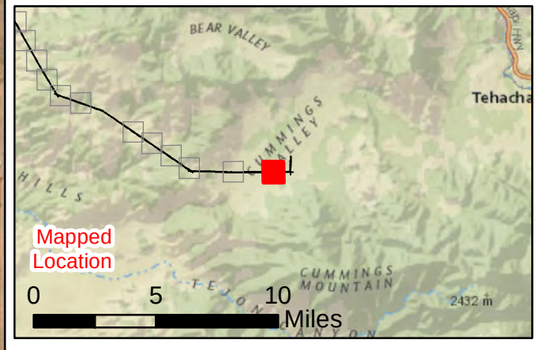
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Wetland Waters
- Wetland Sample Location

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

FIGURESET
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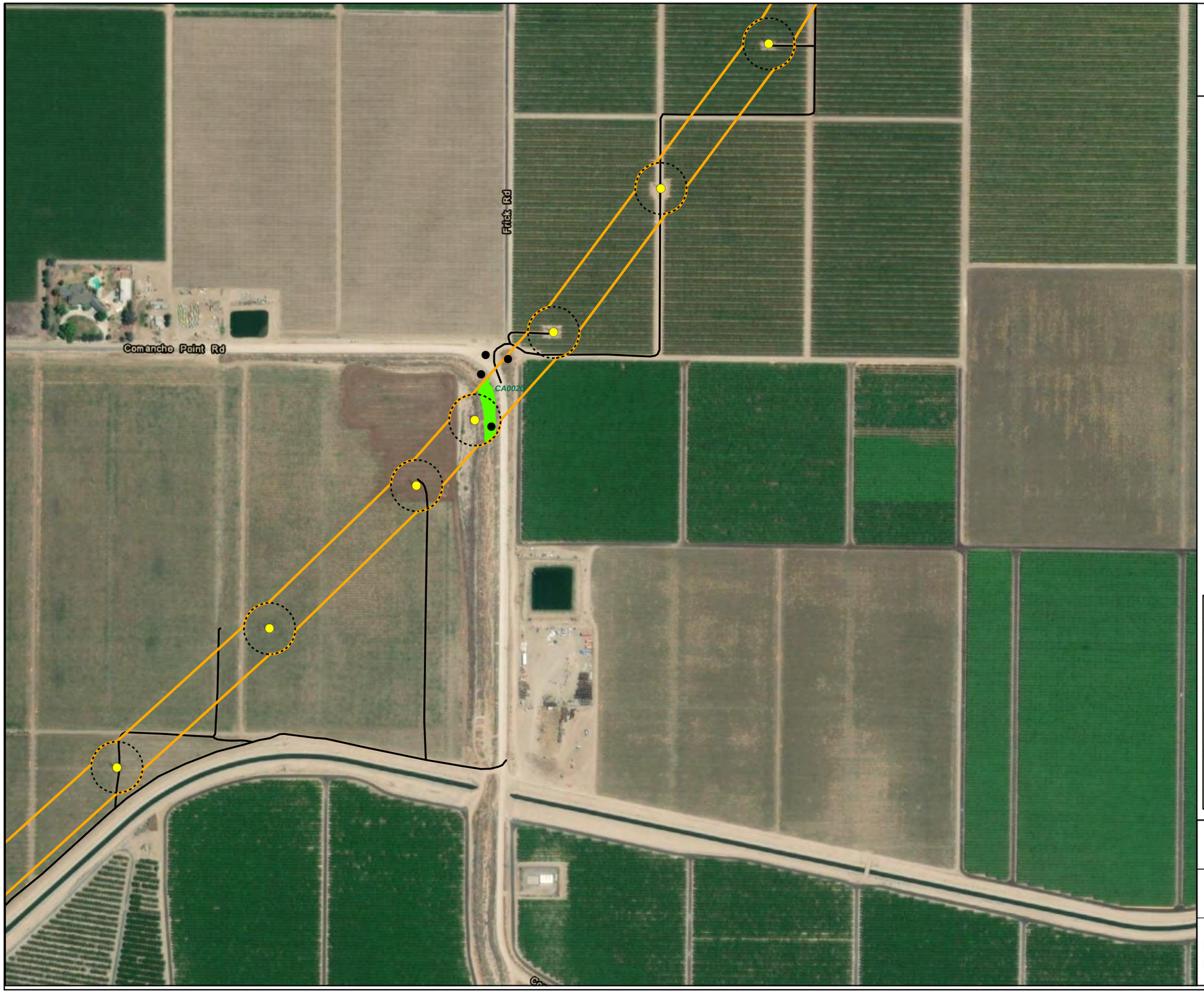
Coordinate System: NAD 1983 UTM Zone 11N

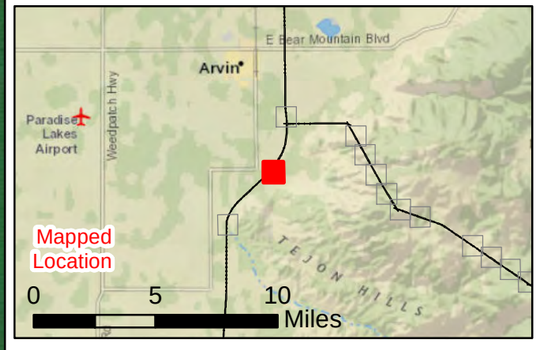


SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

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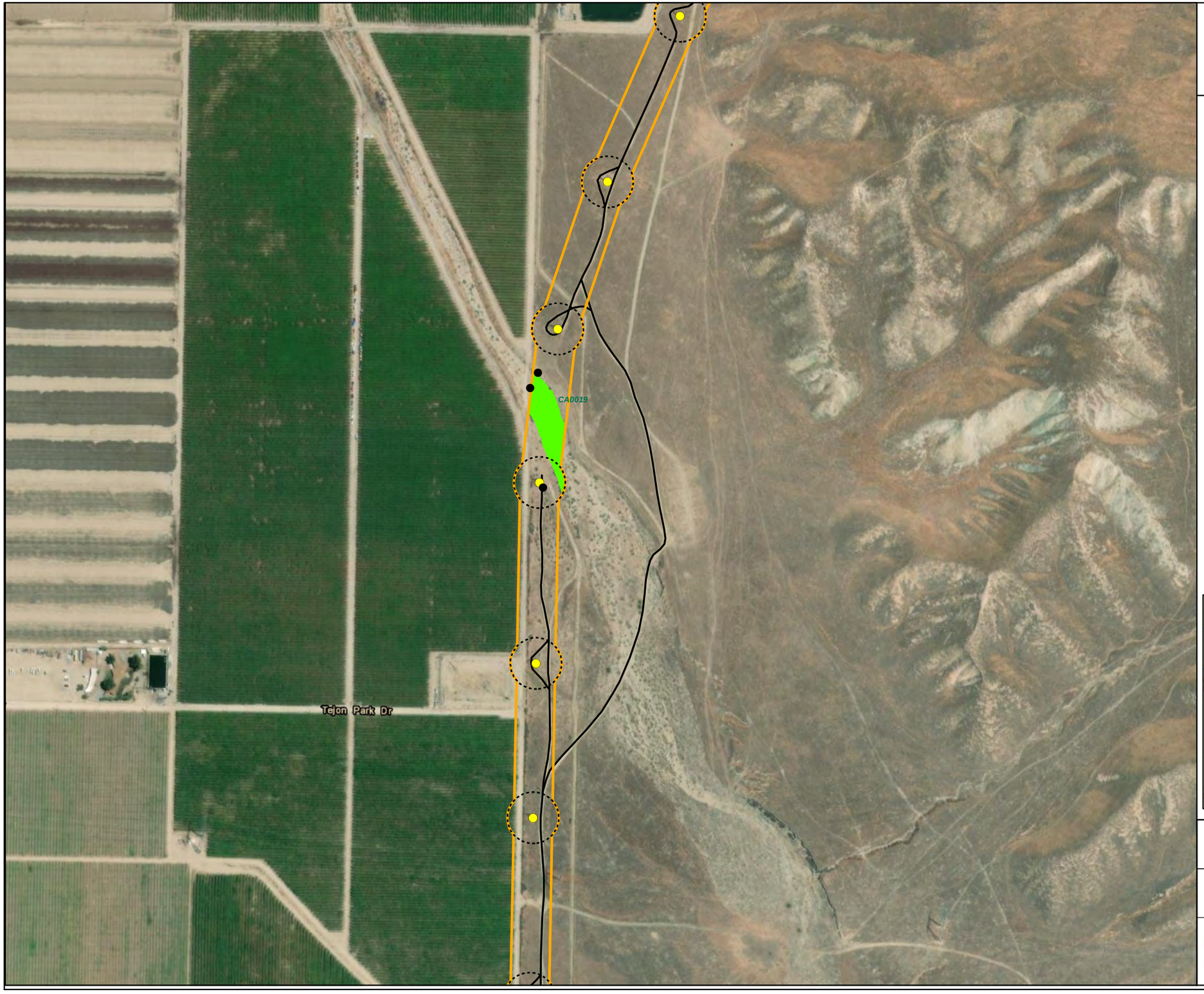
Coordinate System: NAD 1983 UTM Zone 11N

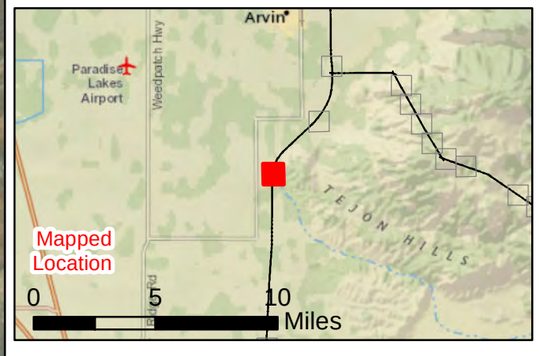


SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

FIGURESET
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Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

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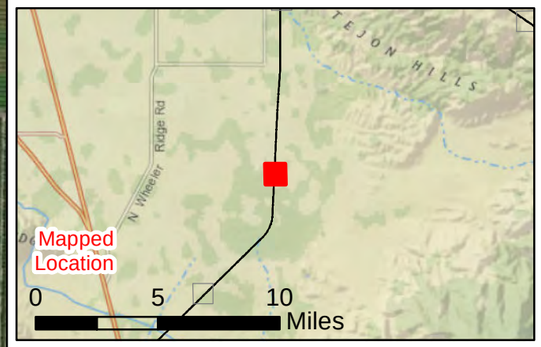
- 100 Foot Radius Tower Buffer
- CDFW State Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

FIGURESET
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SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

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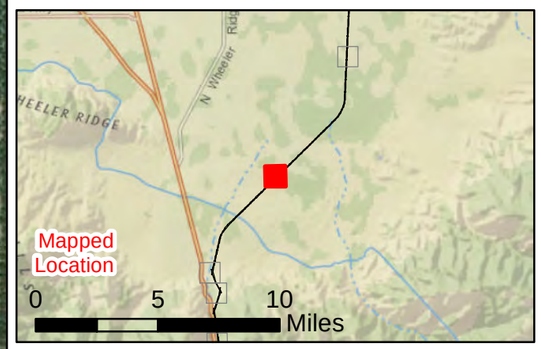
0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

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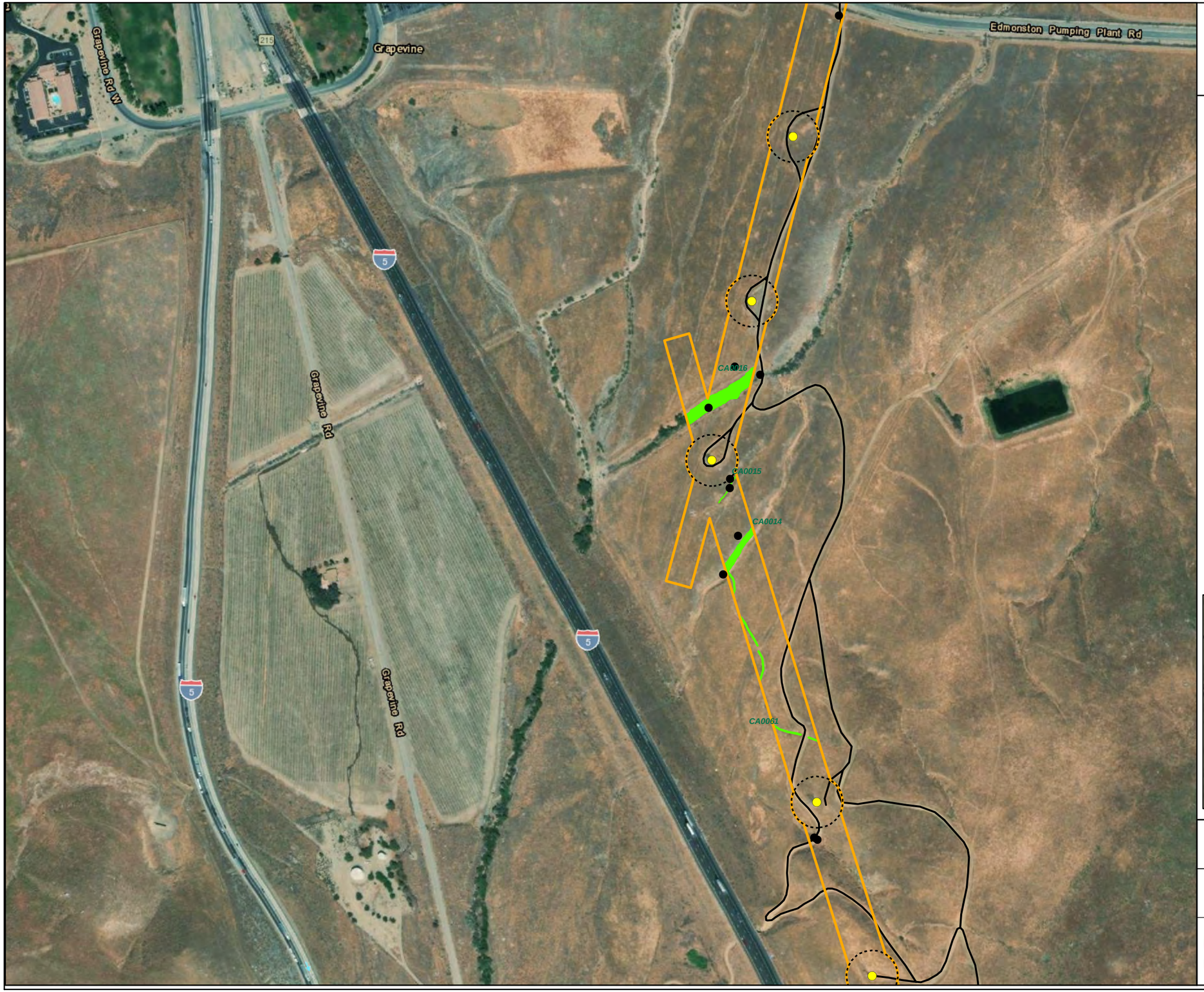
Coordinate System: NAD 1983 UTM Zone 11N

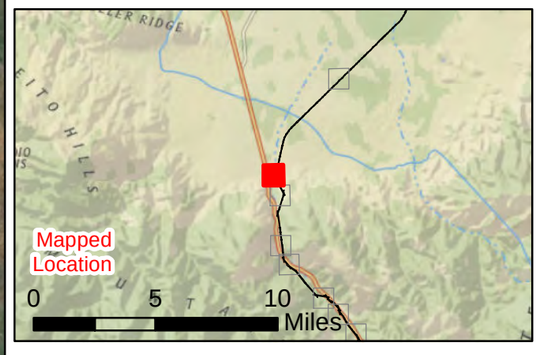


SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

FIGURESET
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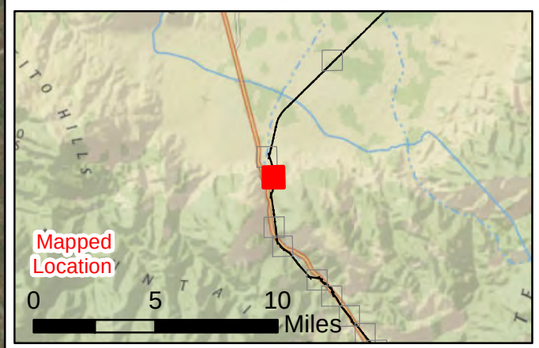
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters
- USACE/RWQCB Wetland Waters
- Wetland Sample Location

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

FIGURESET
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SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

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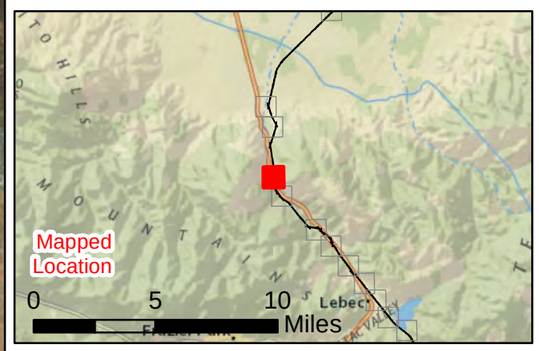
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

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SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

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- 100 Foot Radius Tower Buffer
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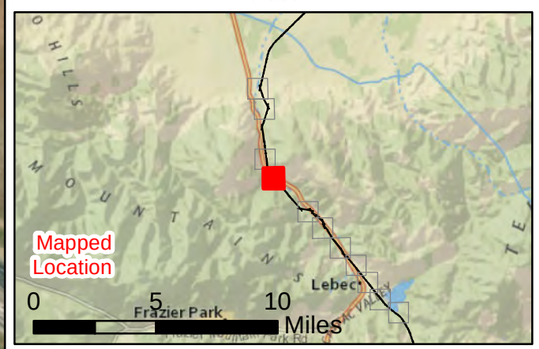
0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

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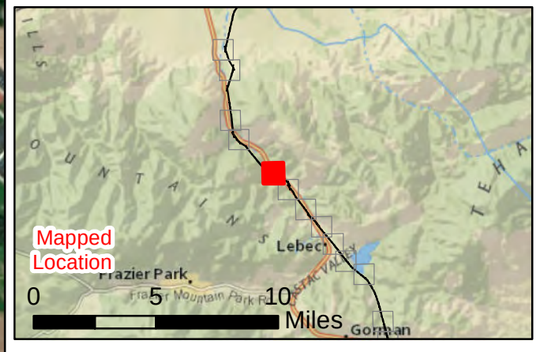
SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters
- USACE/RWQCB Wetland Waters
- Wetland Sample Location

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

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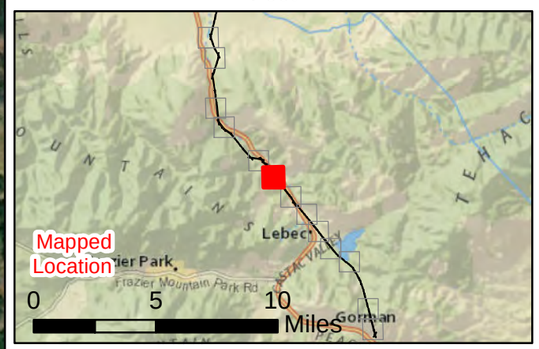
SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

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SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

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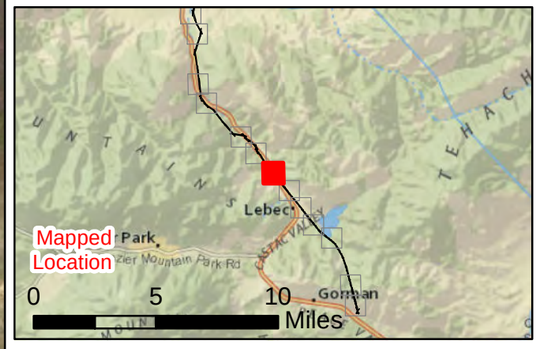
- Wetland Sample Location

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

FIGURESET
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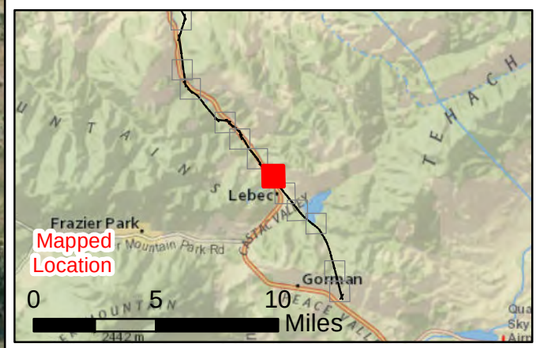
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters
- USACE/RWQCB Wetland Waters
- Wetland Sample Location

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

FIGURESET
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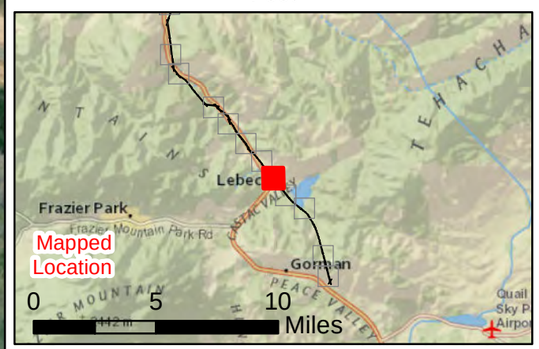
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Wetland Waters
- Wetland Sample Location

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

FIGURESET
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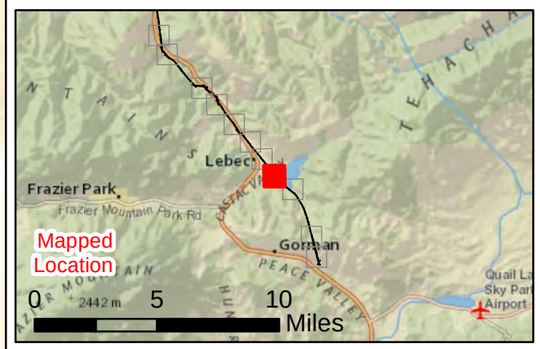
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters
- USACE/RWQCB Wetland Waters
- Wetland Sample Location

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

FIGURESET
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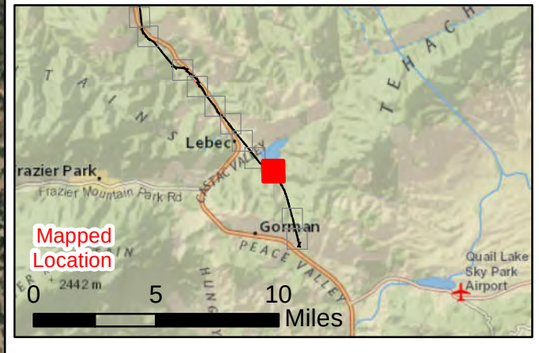
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- USACE/RWQCB Wetland Waters
- Wetland Sample Location

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

FIGURESET
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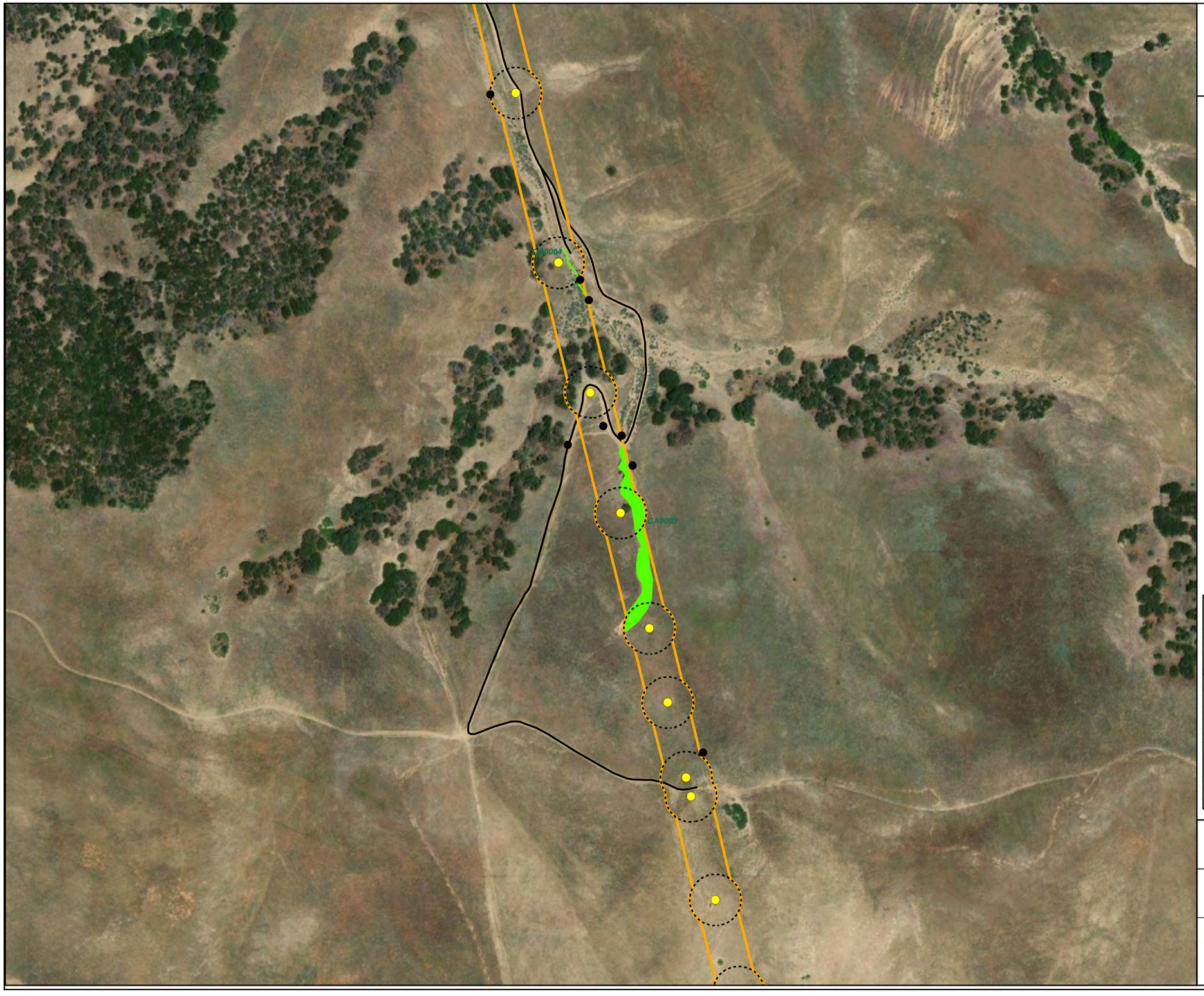
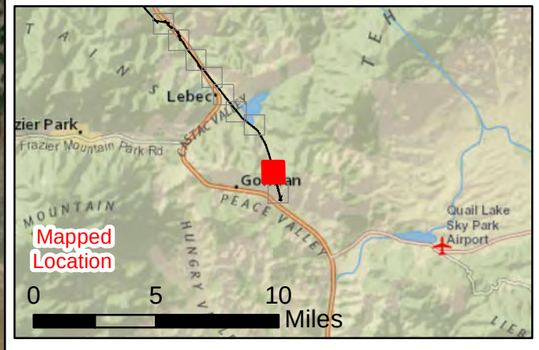


SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

ARCADIS

FIGURESET
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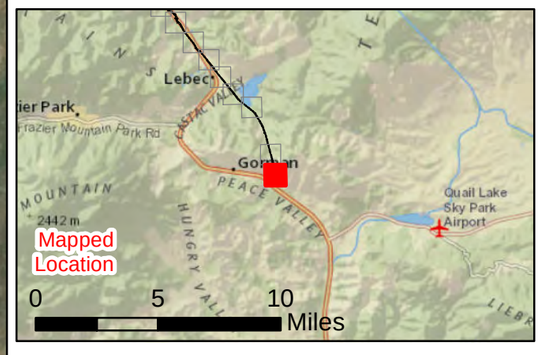
Coordinate System: NAD 1983 UTM Zone 11N

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Legend

- Structure Location
- Photo Locations
- Substation Location
- Access Roads
- Survey Area
- 100 Foot Radius Tower Buffer
- CDFW State Waters
- USACE/RWQCB Wetland Waters
- Wetland Sample Location

0 500 1,000
Feet



GORMAN-KERN RIVER 66 kV PROJECT

JURISDICTIONAL DELINEATION

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FIGURESET
44 of 44

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Coordinate System: NAD 1983 UTM Zone 11N

ATTACHMENT G

Photographic Log

Photo 1. Feature US0001, facing south east, 4/06/17

Photo 4. Feature 0004, facing north, 4/06/17

Photo 2. Feature US0002, facing west, 4/06/17

Photo 5. Feature USW0001, facing north, 4/06/17

Photo 3. Feature US0003, facing southeast, 4/06/17

Photo 6. Feature 0009, facing south west, 4/06/17

Photo 7. Feature USW0002, facing north, 4/06/17

Photo 10. Feature US0007, facing south, 4/05/17

Photo 8. Feature USW0003 and USW0004, facing north, 4/06/17

Photo 11. Feature USW0006, facing north, 4/05/17

Photo 9. Feature 0013, facing southwest, 4/05/17

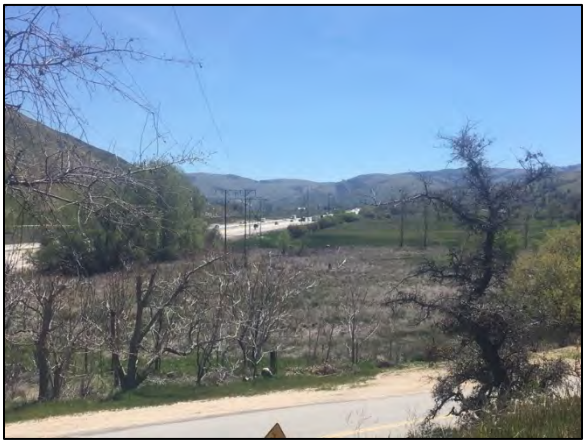

Photo 12. Feature USW0007, facing south, 4/04/17

Photo 13. Feature US0008, facing south, 4/04/17

Photo 16. Feature 0028, facing west, 4/04/17

Photo 14. Feature USW0008, facing north, 4/04/17

Photo 17. Feature USW0010, facing northwest, 4/03/17

Photo 15. Features USW0009, facing northwest, 4/04/17

Photo 18. Feature US0016, facing east, 4/03/17

Photo 19. Feature US0017, facing west, 4/03/17

Photo 22. Feature 0046, facing northwest, 4/03/17

Photo 20. Feature US0018, facing southeast, 4/03/17

Photo 23. Feature US0041, facing south, 4/13/17

Photo 21. Feature US0019, facing north, 4/03/17

Photo 24. Feature 0055, facing south, 4/13/17

Photo 25. Feature USW0012, facing south, 4/13/17

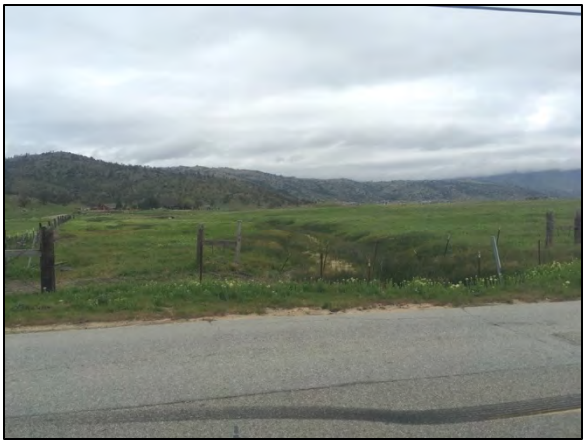

Photo 28. Feature USW0015, facing north, 4/13/17

Photo 26. Feature USW0013, facing north, 4/13/17

Photo 29. Feature US0039, facing north, 4/11/17

Photo 27. Feature USW0014, facing south, 4/13/17

Photo 30. Feature 0035, facing northwest, 4/11/17

Photo 31. Feature US0033, facing west, 4/11/17

Photo 34. Feature US0030, facing southwest, 4/10/17

Photo 32. Feature USW0011, facing east, 4/11/17

Photo 35. Feature US0026, facing west, 4/07/17

Photo 33. Feature US0031, facing southwest, 4/10/17

Photo 36. Feature US0024, facing south, 4/07/17

Photo 37. Feature US0022, facing north, 3/28/17

Photo 40. Feature US0044, facing west, 3/24/17

Photo 38. Feature US0042, facing west, 3/28/17

Photo 41. Feature US0045, facing west, 3/24/17

Photo 39. Feature US0043, facing south, 3/28/17

Photo 42. Feature US0046, facing east, 4/13/17

Photo 43. Feature US0048, facing north, 4/13/17

Photo 44. Feature US0052, facing south, 4/13/17

Photo 45. Feature US0053, facing west, 4/12/17

Photo 46. Feature US0055, facing west, 4/12/17

Photo 47. Feature US0056, facing west, 4/12/17

Photo 48. Feature US0058, facing southwest, 4/12/17

Photo 49. Feature US0059, facing west, 4/13/17

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