

Appendix B.6

**SUN LAKES BLVD PROJECT
DELINEATION OF JURISDICTIONAL WATERS**



**City of Banning
Riverside County, California**

**Submitted to:
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Project No. # 20-554-00800**

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July 2024

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ACRONYMS AND ABBREVIATIONS

AMSL	above mean sea level
BSA	Biological Survey Area
CEQA	California Environmental Quality Act
CDFW	California Department of Fish and Wildlife
CWA	Clean Water Act
EPA	Environmental Protection Agency
FAC	facultative
FACU	facultative upland
FACW	facultative wetland
ft.	Feet
GIS	Geographic Information System
HUC	Hydrologic Cataloging Unit
I-10	Interstate 10
IP	Individual Permit
M	Meters
NL	not listed
NOAA	National Oceanic and Atmospheric Administration
NWI	National Wetlands Inventory
NWP	Nationwide Permit
OBL	obligate
OHWM	ordinary high-water mark
Rapanos	Rapanos v. U.S. and Carabell v. U.S.
RPW	relatively permanent waterway
RWQCB	Regional Water Quality Control Board
SWANCC	Solid Waste Agency of Northern Cook County v. USACE
TNW	traditionally navigable waterway
UPL	upland
USACE	U.S. Army Corps of Engineers
USDA	United States Department of Agriculture, Natural Resources Conservation Service
USFWS	United States Fish and Wildlife Service
USGS	U.S. Geological Survey
WSC	Waters of the State of California
WUS	Waters of the United States

1.0 INTRODUCTION

At the request of Albert A. Webb Associates (Webb), WSP USA Inc. (WSP) conducted a jurisdictional delineation and report for Sun Lakes Boulevard (Blvd.) Realignment Project site located in the city of Banning and unincorporated portions of Riverside County, California. This report presents regulatory framework, methods, and results of a delineation of jurisdictional waters, wetlands, and associated riparian habitat potentially impacted by the proposed project.

1.1 Purpose

The purpose of the delineation is to determine the extent of state and federal jurisdiction within the project area potentially subject to regulation by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA), Regional Water Quality Control Board (RWQCB) under Section 401 of the CWA and Porter Cologne Water Quality Control Act, and California Department of Fish and Wildlife (CDFW) under Section 1602 of the California Fish and Game Code.

1.2 Project Description

The proposed project is a transportation project including construction of a new section of Sun Lakes Boulevard from Highland Home Road to Sunset Avenue (Figure 3) and intersection improvements within the City of Banning's existing road right-of-way (ROW). The project is approximately 5,400 linear feet (1.02 mile). This report has been updated due to a change in the outline of the proposed impacts and to update all related figures. The updated project impacts include 19.4 acres of permanent impacts, 9.1 acres of temporary impacts. Project staging and stockpiling will occur within the City's ROW. Currently, Westward Avenue is a straight east-west unpaved dirt road between Highland Home Road and Sunset Avenue. The project crosses over three creeks, from west to east: Highland Wash, Smith Creek, and Pershing Creek. The project will include the construction of three sets of culverts to cross said creeks.

1.3 Project Location

The project is generally located south of Interstate 10, west of Sunset Avenue and east of Highland Home Road between the terminus of Sun Lakes Boulevard on the west and the terminus of paved Westward Avenue on the east. It can be found in Section 7 of Township 3 South, Range 1 East of the *Beaumont*, California, United States Geological Survey (1978) 7.5-minute topographic quadrangle map (Figure 2). The elevation of the project site ranges from approximately 2,400 to 2,500 feet above sea level. The geographic coordinates near the middle of the site are 33.5512.85° North latitude and -116.5516.29° West longitude. Vegetation communities on site consist primarily of grassland and scrubs.

2.0 REGULATORY FRAMEWORK

2.1 U.S. Army Corps of Engineers

The USACE regulates the discharge of dredged or fill material in waters of the United States (WUS) pursuant to Section 404 of the CWA.

Waters of the U.S.

Categories of Jurisdictional Waters

Under the final rule, the following waters are jurisdictional:

- (1) Waters which are: (i) **traditional navigable waters** (TNWs), *i.e.*, all waters currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (ii) **territorial seas**; or (iii) **interstate waters**, including interstate wetlands.
- (2) **Impoundments** of waters otherwise defined as WOTUS under this definition, other than impoundments of waters identified under paragraph (5).
- (3) **Tributaries** of waters identified in (1) or (2) of this section that:
 - i. Are relatively permanent, standing or continuously flowing; or
 - ii. Either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of waters identified in paragraph (1).
 - *Tributary is not defined in the regulatory text, but the preamble clarifies that this category includes rivers, streams, lakes, ponds, and impoundments, regardless of their flow regime, that flow directly or indirectly through another water or waters to a TNW, territorial sea, or interstate water.*
 - *Tributaries can be natural, modified, or constructed waters and thus, can include ditches and canals.*
- (4) **Wetlands adjacent** to:
 - i. Waters identified in (1); or Relatively permanent, standing, or continuously flowing bodies of water identified in (2) or (3)(i) and with a continuous surface connection to those waters;
 - ii. Waters identified in (2) or (3) when the wetlands either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of waters identified in paragraph (1).
 - *Adjacent is defined as "bordering, contiguous, or neighboring." Wetlands separated from other WOTUS by man-made dikes or barriers, natural river berms, beach dunes, and the like are adjacent wetlands. Shallow subsurface hydrologic connections can establish adjacency.*

- *The preamble says that in a substantial number of cases, adjacent wetlands abut other WOTUS and that, on the whole, nationwide, adjacent wetlands are within a few hundred feet from other WOTUS. In arid areas, adjacent wetlands are likely to be much closer than a few hundred feet, but in larger floodplains and riparian areas where rainfall is higher, wetlands can be a few hundred feet away and still be “adjacent.”*

(5) Intrastate lakes and ponds, streams, or wetlands not identified in paragraphs (1) through (4) that:

- Are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (1) or (3)(i) of this section; or
 - That either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of waters identified in paragraph (1).
- *This is the former (a)(3) “other waters” category. As in the proposed rule, the preamble to the final rule again acknowledges that the agencies have not asserted jurisdiction over (a)(3) waters since 2003. And because this category was not discussed in the 2008 Rapanos Guidance, the application of the relatively permanent and significant nexus tests to this category represents a clear expansion of the pre-2015 regulatory regime.*
 - *The preamble commits both EPA and Corps headquarters to review all draft AIDs for waters assessed under (a)(5) based on the significant nexus standard.*

Relatively permanent standard

- The final rule does not define or quantify what constitutes “relatively permanent” flow. The preamble merely says relatively permanent includes features that have flowing or standing water year-round or continuously during certain times of the year.
- The Agencies are no longer using the term “seasonal” and appear to be backing away from the “typically three months” language in the 2008 *Rapanos* Guidance. Moreover, the preamble could be interpreted to say that “relatively permanent” means flow for more than a short duration in direct response to precipitation, *i.e.*, anything more than ephemeral flow. And the preamble suggests that multiple storm events in succession could be enough to create relatively permanent flow.

The Agencies interpret “continuous surface connection” to be a physical connection requirement, which does not require a continuous surface water connection. Even linear features (e.g., pipes, swales, ditches) can satisfy the physical connection requirement regardless of how often they carry flow. The preamble does not make it clear whether jurisdiction is dependent on the length/distance of a linear physical connection between an adjacent wetland and a relatively permanent WOTUS.

Significantly affect (significant nexus) standard

- The final rule defines “significantly affect” to mean “a material influence on the chemical, physical, or biological integrity of waters identified in paragraph (a)(1) of this section. To determine whether waters, either alone or in combination with similarly situated waters in the region, have a material influence on the chemical, physical, or biological integrity of waters identified in paragraph (a)(1) of this section,” the Agencies will assess the following functions and factors:

o Functions

- Contribution of flow
- Trapping, transformation, filtering, and transport of materials (including nutrients, sediment, and other pollutants)
- Retention and attenuation of floodwaters and runoff
- Modulation of temperature in waters identified in paragraph (a)(1) of this section
- Provision of habitat and food resources for aquatic species located in waters identified in paragraph (a)(1) of this section

o Factors

- The distance from a water identified in paragraph (a)(1) of this section
- Hydrologic factors, such as the frequency, duration, magnitude, timing, and rate of hydrologic connections, including shallow subsurface flow
- The size, density, or number of waters that have been determined to be similarly situated
- Landscape position and geomorphology
- Climatological variables such as temperature, rainfall, and snowpack

Exclusions

The final rule codifies many more exclusions than the proposed rule (and the 1986 regulations). Most of the exclusions resemble those in the 2015 Rule:

- Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act.
- *The preamble clarifies that Wastewater Treatment Systems (WTS) constructed prior to the enactment of the CWA can still be excluded and that WTS are not limited to manmade bodies of water consistent with longstanding practice.*

Prior converted cropland designated by USDA. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. For CWA purposes, the final authority regarding CWA jurisdiction remains with EPA.

○ *The preamble implies, but does not clearly state, that lands remain excluded as PCC even if they change to a non-agricultural use so long as wetland characteristics do not return.*

- Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water.
 - *Excluded ditches would not become jurisdictional solely by virtue of connecting to a downstream WOTUS or because wetland characteristics develop within the confines of the ditch.*
- Artificially irrigated areas that would revert to dry land if the irrigation ceased.
- Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing.
 - *The preamble says this exclusion applies only to lakes/ponds that satisfy the terms of the exclusion, so apparently other types of ponds (e.g., log cleaning ponds) would not qualify.*
- Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons.
- Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States.
 - iii. Swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow

Supreme Court Decisions

Solid Waste Agency of Northern Cook County

On January 9, 2001, the Supreme Court of the United States issued a decision on Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al. with respect to whether the USACE could assert jurisdiction over isolated waters. The Solid Waste Agency of North Cook County (SWANCC) ruling stated that the USACE does not have jurisdiction over “non-navigable, isolated, intrastate” waters.

Rapanos/Carabell

In the Supreme Court cases of *Rapanos v. United States* and *Carabell v. United States* (herein referred to as *Rapanos*), the court attempted to clarify the extent of USACE jurisdiction under the CWA. The nine Supreme Court justices issued five separate opinions (one plurality opinion, two concurring opinions, and two dissenting opinions) with no single opinion commanding a majority of the Court. In light of the *Rapanos* decision, the USACE will assert jurisdiction over a traditional navigable waterway (TNW), wetlands adjacent to TNWs, non-navigable tributaries of TNWs that are a relatively permanent waterway (RPW) where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months) and wetlands that directly abut such tributaries. The USACE will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a TNW: non-navigable tributaries that are not relatively permanent, wetlands adjacent to non-navigable tributaries that are not RPWs, and wetlands adjacent to but that do not directly abut a non-navigable RPW.

Flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary indicate whether they significantly affect the chemical, physical and biological integrity of downstream TNWs. Analysis of potentially jurisdictional streams includes consideration of hydrologic and ecologic factors. The consideration of hydrological factors includes volume, duration, and frequency of flow, proximity to traditional navigable waters, size of watershed, average annual rainfall, and average annual winter snowpack. The consideration of ecological factors also includes the ability for tributaries to carry pollutants and flood waters to a TNW, the ability of a tributary to provide aquatic habitat that supports a TNW, the ability of wetlands to trap and filter pollutants or store flood waters, and maintenance of water quality.

Sackett v. EPA Supreme Court

Sackett began backfilling an Idaho lot with dirt to build a home. The Environmental Protection Agency informed Sackett that the property contained wetlands and that the backfilling violated the Clean Water Act, which prohibits discharging pollutants into “the waters of the United States,” 33 U.S.C. 1362(7). The EPA ordered Sackett to restore the site, threatening penalties of over \$40,000 per day. The EPA classified the Sackett wetlands as “waters of the United States” because they were near a ditch that fed into a creek, which fed into Priest Lake, a navigable, intrastate lake. The Ninth Circuit affirmed summary judgment in favor of the EPA.

The Supreme Court reversed. CWA jurisdiction over an adjacent wetland requires that the adjacent body of water constitutes waters of the United States (a relatively permanent body of water connected to traditional interstate navigable waters) and a continuous surface connection between the wetland and that water, making it difficult to determine where the ‘water’ ends and the ‘wetland’ begins.”

The Court reviewed the history of judicial interpretation of “the waters of the United States” and enforcement by federal agencies, which argued that the significant-nexus test was sufficient to establish jurisdiction over “adjacent” wetlands. Under that test, nearly all waters and wetlands are potentially susceptible to regulation, “putting a staggering array of landowners at

risk of criminal prosecution for such mundane activities as moving dirt.” The CWA’s use of “waters” encompasses only relatively permanent, standing, or continuously flowing bodies, ordinarily called streams, oceans, rivers, and lakes. Wetlands qualify as “waters of the United States” only if “indistinguishable from waters of the United States,” having a continuous surface connection to bodies that are waters of the United States in their own right, with no clear demarcation between waters and wetlands.

On August 29, 2023, the EPA and USACE announced a final rule amending the 2023 definition of “waters of the United States” to conform with the recent Supreme Court decision in *Sackett v. EPA*. The ruling removes the significant nexus test and confirms that only drainages with relatively permanent flows will fall under USACE jurisdiction.

2.2 Regional Water Quality Control Board

The RWQCB regulates activities pursuant to Section 401(a)(1) of the CWA. Section 401 of the CWA specifies that certification from the State is required for any applicant requesting a federal license or permit including a Section 404 permit. Through the Porter Cologne Water Quality Control Act, the RWQCB asserts jurisdiction over Waters of the State of California (WSC) which is generally the same as WUS but may also include waters not in federal jurisdiction.

The State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State was adopted in April 2020 and put into effect statewide on May 28, 2020 (State Water Resources Control Board, 2020).

The Water Boards define an area as wetland as follows:

An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area’s vegetation is dominated by hydrophytes or the area lacks vegetation.

The Water Code defines WSC broadly to include “any surface water or groundwater, including saline waters, within the boundaries of the state.” WSC include all WUS but also includes waters not in federal jurisdiction.

The following wetlands are waters of the state:

1. Natural wetlands,
2. Wetlands created by modification of a surface water of the state, and
3. Artificial wetlands that meet any of the following criteria:

- a. Approved by an agency as compensatory mitigation for impacts to other waters of the state, except where the approving agency explicitly identifies the mitigation as being of limited duration;
- b. Specifically identified in a water quality control plan as a wetland or other water of the state;
- c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape; or
- d. Greater than or equal to one acre in size, unless the artificial wetland was constructed, and is currently used and maintained, primarily for one or more of the following purposes (i.e., the following artificial wetlands are not waters of the state unless they also satisfy the criteria set forth in 2, 3a, or 3b):
 - i. Industrial or municipal wastewater treatment or disposal,
 - ii. Settling of sediment,
 - iii. Detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program,
 - iv. Treatment of surface waters,
 - v. Agricultural crop irrigation or stock watering,
 - vi. Fire suppression,
 - vii. Industrial processing or cooling,
 - viii. Active surface mining – even if the site is managed for interim wetlands functions and values,
 - ix. Log storage,
 - x. Treatment, storage, or distribution of recycled water, or
 - xi. Maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or
 - xii. Fields flooded for rice growing.

All artificial wetlands that are less than an acre in size and do not satisfy the criteria set forth in 2, 3.a, 3.b, or 3.c are not WSC.

The CDFW regulates water resources under Section 1600-1616 of the California Fish and Game Code. Section 1602 states:

“An entity may not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake (CDFW, 2015).”

Evaluation of CDFW jurisdiction followed guidance in the Fish and Game Code and A Review of Stream Processes and Forms in Dryland Watersheds. In general, under 1602 of the Fish and Game Code, CDFW jurisdiction extends to the maximum extent or expression of a stream on the landscape (CDFW, 2010). It has been the practice of CDFW to define a stream as “a body of water that flows perennially or episodically and that is defined by the area in a channel which water currently flows or has flowed over a given course during the historic hydrologic course regime, and where the width of its course can reasonably be identified by physical or biological indicators” (Brady and Vyverberg, 2013). Thus, a channel is not defined by a specific flow event, nor by the path of surface water as this path might vary seasonally. Rather, it is CDFW's practice to define the channel based on the topography or elevations of land that confine the water to a definite course when the waters of a creek rise to their highest point.

3.0 METHODS

Prior to conducting delineation fieldwork, the following literature and materials were reviewed:

- Aerial photographs of the survey area at a scale of 1:1800 to determine the potential locations of jurisdictional waters or wetlands;
- USGS topographic map (Appendix A - Figure 2) to determine the presence of any “blue line” drainages or other mapped water features.
- USDA soil mapping data (Appendix A - Figure 3); and
- USFWS National Wetlands Inventory map to identify areas mapped as wetland features (Appendix A - Figure 4).

A field survey of the project site was conducted by WSP senior biologist Dale Hameister on 18 April 2024. The survey consisted of walking the entire survey area and identifying potentially jurisdictional water features. All accessible portions of the survey areas were walked to determine if any topographic low-spots meet the minimum criteria to be considered under the jurisdiction of USACE, RWQCB, and CDFW. Visual observations of vegetation types and changes in hydrology and soil texture, and culvert locations were used to locate areas for evaluation. Weather conditions during delineation fieldwork was conducive for surveying with clear skies.

USACE regulated WUS, including wetlands, and RWQCB WSC were delineated according to the methods outlined in *A Field Guide to the Identification of the Ordinary High-Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE, 2008a). The extent of WUS was determined based on indicators of an OHWM. The OHWM width was measured at points wherever clear changes in width occurred.

Potential federally regulated wetlands were identified based on the *Wetlands Delineation Manual* (USACE, 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE, 2008b). Additional data was recorded to determine if an area fulfilled the wetland criteria parameters. Three criteria must be fulfilled in order to classify an area as a wetland under the jurisdiction of the USACE: 1) a predominance of hydrophytic vegetation, 2) the presence of hydric soils, and 3) the presence of wetland hydrology.

CDFW jurisdiction is delineated by measuring the elevations of land that confine a stream to a definite course when its waters rise to their highest level and to the extent of associated riparian vegetation. WSC/CDFW jurisdictional areas were determined by the bankfull channel edge and RWQCB jurisdictional areas were determined by

the edge of the OHWM. In some areas the eroded banks were vertical, so these areas shared the same jurisdictional boundary lines.

All washes identified were typical of dryland fluvial systems with unvegetated, sand bottom channels. Therefore, no soil pits were dug, and no wetland data forms were used to collect information.

To determine jurisdictional boundaries, the surveyor walked the length of the drainage within the project area and recorded the centerline with a Trimble GeoXH global positioning system. The width of the drainage was determined by the OHWM and bankfull width measurements at locations where transitions were apparent. Other data recorded included bank height and morphology, substrate type, and all vegetation within the streambed and riparian vegetation adjacent to the streambed. Areas that lacked evidence of hydrophytic vegetation, lacked evidence of wetland hydrology, and had no recent disturbance, did not require a soil pit since the other wetland indicators were not present. Upon completion of fieldwork, all data collected in the field were incorporated into a Geographic Information System (GIS) along with basemap data. The GIS was then used to quantify the extent of jurisdictional waters and prepare graphical representations of that data.

4.0 ENVIRONMENTAL SETTING

4.1 Existing Conditions

Adjacent to and south of the Sun Lakes Boulevard ROW are existing utilities that include three well sites and one wastewater lift station. Within Westward Avenue, there are many existing utility lines including, a potable water line, sanitary sewer line, recycled water line, fiber optics line, three oil lines, and an underground telephone line. Single-family homes are west of Highland Home Road. East of Sunset Avenue are single-family homes, a small number of commercial businesses, the Mt. San Jacinto College San Geronio Pass Campus, and undeveloped open space, including habitat for biological elements of concern to the MSHCP. The project footprint outside of the facilities detailed above is currently undeveloped open space, including habitat for biological elements of concern to the MSHCP, as are areas to the north and south of the project. Three named, deeply incised drainages (i.e., Pershing Creek, Smith Creek and Highland Wash) and their tributaries are present within the proposed project site. Existing structures located on-site include city-owned wells, an agricultural storage shelter, and a number of easements for streets, utilities, gas and oil pipelines, landscaping, and communications systems.

4.2 Hydrology

The project is located within the Whitewater Watershed. Onsite drainages flow generally to the southeast and eventually connect the Whitewater River to the east and under years of heavy rain may eventually flow into the Salton Sea. The average rainfall for the area is 12.98 inches per year (NOAA Regional Climate Center). Weather data was recorded in the City of Beaumont. The delineation survey was conducted following a year of above average rainfall in the 2019-2020 rain season. The annual rainfall for the 2018-2019 season was 26.94 inches. The total thus far for the 2019-2020 season is 11.56 inches which is higher than the usual average. (NOAA Regional Climate Center).

The drainages were all dry during the surveys and no surface waters flowing were observed.

4.3 Vegetation

4.3.1 Vegetation Communities

The project site contains six vegetation communities / land cover categories: buckwheat scrub, non-native grassland, riparian scrub/woodland, Riversidean alluvial fan sage scrub, non-vegetated streambed, and disturbed/developed. **Disturbed/developed** areas are the direct result of current or past human activity (buildings, roads, et cetera). The following are somewhat more natural land cover categories, although non-native grasslands are comprised largely of naturalized non-native plant species introduced by humans:

- Wetland indicator status denotes the probability of individual species of vascular plants occurring in freshwater, brackish and saltwater wetlands in the United States. The wetland status of 7,000 plants is determined upon information contained in a list compiled in the National Wetland Inventory undertaken by the U.S. Fish and Wildlife Service and developed in cooperation with a federal inter-agency review panel.
- **Obligate wetland** (OBL) - Almost always occurs in wetlands under natural conditions (estimated probability > 99%).
- **Facultative wetland** (FACW) - Usually occurs in wetlands (estimated probability 67% – 99%), but occasionally found in non-wetlands (estimated probability 1% – 33%).
- **Facultative** (FAC) - Equally likely to occur in wetlands and non-wetlands (estimated probability 34% – 66%).
- **Facultative upland** (FACU) - Usually occurs in non-wetlands (estimated probability 67% – 99%), but occasionally found in wetlands (estimated probability 1% – 33%).
- **Obligate upland** (UPL) - Almost always occurs in non-wetlands under natural conditions (estimated probability > 99%).

4.3.2 Athel tamarisk

This category is mapped in areas dominated by non-native Athel tamarisk (*Tamarix aphylla*) trees or shrubs. These areas are adjacent to the dry streambed but are not considered part of riparian vegetation. Other understory species observed include shortpod mustard (*Hirschfeldia incana*), red-brome (*Bromus rubens*), and turkey-mullein (*Croton setiger*).

4.3.3 Buckwheat Scrub

This category represents buckwheat scrub. This habitat is dominated by California buckwheat (*Eriogonum fasciculatum*). Other plant species within this community include California sagebrush (*Artemisia californica*), brittlebush (*Encelia californica*), pinebush (*Ericameria pinifolia*), deerweed (*Lotus scoparius*), common sand aster (*Corethrogyne filaginifolia*), turkey mullein, shortpod mustard, and horseweed (*Erigeron canadensis*). The majority of plants observed are all upland plant that do not occur in wetland conditions. Areas within the eroded dry stream areas adjacent to the active channel also contain rough cocklebur (*Xanthium strumarium*)(FAC), Johnsongrass (*Sorghum halepense*), and mugwort (*Artemisia douglasiana*)(FAC). A few isolated tree of heaven (*Ailanthus altissima*), blue elderberry (*Sambucus nigra* ssp. *caerulea*) (FACU), and southern California black walnut (*Juglans californica*) (FACU) were observed within the buckwheat scrub. The few wetland indicator plants and the lack of FACW or OBL status plants demonstrate that the vegetation would not meet the criterion to be considered a wetland.

4.3.4 Riversidean Alluvial Fan Sage Scrub

Riversidean alluvial fan sage scrub is also known as 'soft chaparral' habitat and is found on south-facing upland slopes, and along sandy ephemeral streams. This vegetation community typically occurs below 3,000 feet elevation and occupies generally drier sites than standard chaparral habitat. Within the project site, scale broom (*Lepidospartum squamatum*) is an indicator species of Riversidean alluvial fan sage scrub. Other species observed include mugwort and tarragon (*Artemisia dracunculus*).

4.3.5 Riparian Scrub Woodland

This habitat is commonly dominated by young willow trees and shrubs. Within the project area the riparian scrub woodland areas are small patches dominated by Fremont cottonwood (*Populus fremontii*) (FAC), Goodding's black willow (*Salix gooddingii*)(FACW), red willow (*Salix lasiolepis*)(FACW), or mule fat (*Baccharis salicifolia*) (FAC). This habitat is only found within selective portions of the on-site drainage features and is limited to the central portion of the project site.

4.3.6 Grassland

This habitat is commonly used for agricultural use and is dominated by non-native annual grasses (*Poaceae*) in the spring. Some species of grasses that are observed within the grassland areas include wild oats (*Avena fatua*), cheatgrass (*Bromus tectorum*), red brome (*Bromus madritensis* ssp. *rubens*). Other dominate species include shortpod mustard, red-stemmed filaree (*Erodium cicutarium*), and annual

ragweed (*Ambrosia acanthicarpa*). Late summer dominate plants include turkey-mullein and vinegarweed (*Trichostema lanceolatum*).

4.3.7 Non-vegetated Streambed

The majority of the drainages within the project site are classified as non-vegetated streambed. These areas contain mostly bare coarse sand with only some isolated patches of vegetation including mule fat, ragweed, mustard, and Johnson grass, however these patches were very small and not large enough to be mapped as separate habitat areas. In general areas with less than 0.01 acres are not mapped as separate habitat.

4.4 Soils

Soil mapping (Appendix A - Figure 3) indicates that areas of the northwestern site were used as borrow pits in the past but there is little or no evidence of that now. The remainder of the site contains sandy loam soils. No hydric soils were observed on-site.

4.5 National Wetlands Inventory

The United States Fish and Wildlife Service (USFWS) is the principal Federal agency that provides information to the public on the extent and status of the Nation's wetlands. The USFWS has developed a series of maps, known as the National Wetlands Inventory (NWI) to show wetlands and deep-water habitat. This geospatial information is used by Federal, State, and local agencies, academic institutions, and private industry for management, research, policy development, education, and planning activities. The NWI program was neither designed nor intended to produce legal or regulatory products; therefore, wetlands identified by the NWI program are not the same as wetlands defined by the USACE.

The NWI Mapper (USFWS, 2020) was accessed on-line to review mapped wetlands within the project study areas. The NWI mapper (Figure 4, Appendix A) shows three drainages flowing through the survey area classified as Riverine, Intermittent, Streambed, Temporary Flooded (R4SBJ) (Cowardin, et. al., 1979). The NWI data was mapped from aerial photographs from 1985. The drainages have changed course and had additional erosion since then.

5.0 RESULTS

Three main washes were identified within the project survey area that contained both bed and bank and OHWM including Highland Wash, Pershing Wash, and Smith Creek. The Jurisdictional Delineation Maps (Appendix A – Figure 5) identify all observed on-site jurisdictional drainages. Table 1-3 includes a list of waterways identified in the project area, their jurisdictional status and area of jurisdiction, and Cowardin classification.

The soils within the washes are coarse sand with no signs of redox or any other wetland soil indicator.

Due to the limited hydric vegetation and total lack of hydric soils observed within the washes, the drainages are considered ephemeral and only have flowing water during and immediately after storm events.

The USACE, in combination with the EPA, when necessary, reserves the ultimate authority in making the final jurisdictional determination of WUS and the RWQCB reserves the ultimate authority in making the final jurisdictional determination of WSC. Additionally, CDFW has ultimate discretion in the determination of their jurisdiction. Based on our delineation, all 5 features identified meet the requirements for USACE, CDFW and RWQCB jurisdiction.

Table 1. Survey Site Information

Drainage	Latitude	Longitude	Quad	Township	Range	Section
Highland Wash	34.128009	-116.055896	Beaumont	3S	1E	7 and 18
Smith Creek	34.126261	-116.056539	Beaumont	3S	1E	12 and 18
Pershing Creek	34.126254	-116.056002	Beaumont	3S	1E	12 and 18

Table 3. Summary of Jurisdictional Areas

Drainage ID /Survey Area	Watershed	Waters of the US Length (feet)	Waters of the US (acre)	RWQCB Length (Feet)	RWQCB (acre)	CDFW Length (Feet)	CDFW (acre)	Latitude	Longitude	Cowardin Class	Class of Aquatic Resource
Highland Wash	Whitewater	0	0	403	0.12	403	0.12	33.922444	-116.928651	R4SBJ	non-section10-non wetland
Smith Creek	Whitewater	0	0	256	0.12	256	0.12	33.922884	-116.925072	R4SBJ	non-section10-non wetland
Pershing Creek	Whitewater	0	0	286	0.23	286	0.23	33.922570	-116.919933	R4SBJ	non-section10-non wetland

R4SBJ – Riverine, Intermittent, Streambed, Intermittently Flooded based on Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, et. al., 1979).

6.0 IMPACTS TO JURISDICTIONAL AREAS

Highland Wash is an ephemeral drainage containing riparian and riverine resources that flows from north to south and crosses perpendicular to the proposed project. Flow originates from north of Interstate 10 and from the Sun Lakes community immediately northwest of the project.

In the area of the project, Highland Wash contains an active low flow channel with adjacent active floodplain that is bordered on the west with low terraces and on the east are incised channel walls that are both bordered by uplands. The active low-flow channel is approximately 12-inches wide in the project area with a silty/sandy bed and no vegetation. Evidence of flows were identified by benches and drift present in the project area. The adjacent active floodplain varies from roughly 3-feet to 15-feet wide and evidenced by a more pebbly substrate than the low flow channel, as well as ripples, older drift, presence of bed and bank, benches and no vegetation. The ordinary high-water mark (OHWM) is approximately 8-inches and indicated by break in slope and change in vegetative cover from active floodplain to low terrace. The low terrace borders the floodplain on the west with mid-stage upland vegetation consisting of California buckwheat that uniformly dominates the drainage area from the low terrace to the nearby hill tops. The outer limit of the low terrace is characterized by a higher vegetative density of buckwheat and marks the limit of potential CDFW jurisdiction.

Highland Wash likely flows for less than 3 months per year and is therefore does not have permanent flow and would not be considered USACE jurisdictional. Highland Wash joins with Smith Creek at Westward Avenue.

Smith Creek is an ephemeral drainage containing riparian and riverine resources that flows from north to south and crosses perpendicular to the proposed project and east of Highland Wash. Flow to Smith Creek originates from a large watershed area north of Interstate 10. In the area of the project, Smith Creek contains an active low flow channel with adjacent active floodplain that is bordered with low terraces. The active low-flow channel is approximately 8-inches wide with a silty/sandy bed and no vegetation. Evidence of flows were identified by benches and drift present in the project area. The adjacent active floodplain was on average 20-feet wide and the limits of which evidenced by a more pebbly substrate than the low flow channel, as well as ripples, older drift, presence of bed and bank, benches and limited pockets of early-stage vegetation. OHWM is approximately 6-inches and indicated by break in slope and changes in vegetative cover and sediment texture from active floodplain to low terrace. The low terrace borders the floodplain on the west with late-stage upland vegetation consisting mostly of California buckwheat that uniformly dominates the drainage area from the low terrace to the nearby hill tops. The outer

limit of the low terrace is characterized by change in slope and a higher vegetative density of California buckwheat and marks the limit of potential CDFW jurisdiction. Smith Creek likely flows for less than 3 months per year and is therefore does not have permanent flow and would not be considered USACE jurisdictional. Highland Wash joins with Smith Creek at Westward Avenue. Smith Creek is tributary to San Geronio Creek, which is tributary to the Whitewater River.

Pershing Creek is a wide ephemeral drainage containing riparian and riverine resources that flows from north to south and crosses perpendicular to the proposed project. It is located east of Smith Creek. Flows to Pershing Creek originate from north of Interstate 10. In the area of the project, Pershing Creek splits around an island approximately 0.24-acre in size of Riversidean alluvial fan sage scrub into two sets of active low flow channels with adjacent active floodplains. The Riversidean alluvial fan sage scrub is dominated by scale broom. The active low flow channels are approximately 10-inches wide in the project area with a fine sandy bed and no vegetation. Evidence of flows were identified by benches and ripples present in the project area. The active floodplain is on average 38-feet wide and bordered by short low terraces that are bordered by steep embankments that are roughly 20-feet high to the east and west of the creek. One mature eucalyptus tree (*Eucalyptus* species) on the far westerly bank is also within the project area. The active floodplain is evidenced by a more sandy/pebbly substrate then the low flow channel, as well as older drift, mud cracks, and early-stage vegetation of buckwheat and annual filarees (*Erodium* species). OHWM is approximately 10-inches and indicated by break in slope and changes in vegetative cover and sediment texture from active floodplain to low terrace. The low terrace borders the floodplain on the west with silty soil and 95% cover of latestage upland vegetation consisting of California buckwheat that uniformly dominates the drainage area from the low terrace to the nearby hill tops. The outer limit of the low terrace on the east side of the creek is characterized by a change in slope and higher vegetative density of buckwheat and marks the limit of potential CDFW jurisdiction. The outer limit on the west side of the creek is characterized by a near-vertical incised channel bank.

Pershing Creek likely flows for less than 3 months per year and is therefore does not have permanent flow and would not be considered USACE jurisdictional. Pershing Creek merges with Smith Creek far downstream of the project limits.

Existing Culverts under Westward Avenue are riverine resources and potentially CDFW and RWQCB jurisdictional waters because although they are confined and man-made, they convey flow from the three preceding drainages across Westward Avenue. There are a total of 6 culverts of varying diameters and lengths for a total footprint of approximately 0.02 acre within the project limits.

Highland Wash

- 18-inch diameter, 24 feet long
- 54-inch diameter, 27 feet long
- 54-inch diameter, 10 feet long

Smith Creek

- 48-inch diameter, 35 feet long

Pershing Creek

- 48-inch diameter, 45 feet long 48-inch diameter, 44 feet long

Table 1 lists the riparian/riverine and potentially jurisdictional features within the project footprint with additional details on each pursuant to USACE criteria. Figure 4 identifies all observed project site riparian/riverine resources and highlights the resources that require mitigation and therefore triggered the need for this DBESP. Flow from the project site drainages enters the MSHCP Conservation Area approximately 4.5 miles downstream in the San Geronio Pass Special Linkage Area. The functions and values of the project site drainages and the surrounding upland loams include absorption and the gradual release of water into the downstream MSHCP Conservation Area. The drainages also provide sediment transport to downstream areas.

The conclusion of the Northwest Hydrological Consultants technical memorandum (NCH 2024) on the project site indicates that there would likely be minimal sediment transport impacts associated with the current crossing improvement plans. Hydraulic conditions upstream of all three of the proposed crossings are very comparable under pre- and post-project scenarios. Note that the with-project hydraulic simulation results reflect proposed as-built conditions and assume the crossing openings are clear of accumulations and the support piers are clear of debris at the time of the peak flow event. It is recommended that regular inspections and clearing (as needed) of the crossings be conducted to maintain these conditions. Maintenance inspections should occur, at minimum, annually prior to flood season and after any significant runoff event. Pier nose extensions (debris fins) or debris sweepers are recommended at the front end of the support piers if vegetative debris loading is of concern, to minimize the impact of pier debris accumulation on upstream hydraulics during flood events.

The topography and vegetation in the project site drainages also provide cover and corridors for the shelter and movement of wildlife. The Project will include the construction of three sets of culverts to cross said creeks. The culverts are multi-cell reinforced concrete box (RCB) channels running under the proposed Sun Lakes Boulevard roadway extension. Straight wing walls with concrete and riprap aprons will be constructed at the upstream end of each channel while vertical wing walls and concrete aprons will be provided at the downstream end of channels. Concrete

ramps will be constructed at the south end of the channels to provide maintenance access. Swales and trapezoidal channels will be provided to intercept stormwater run-on from north of the Project and discharge it to the proposed channels. The project will retain existing culverts such that sediment transport and wildlife movement functions and values will be retained.

Table 4 Summary of Jurisdictional Impact Areas

	Lat	Long	Watershed	USACE perm impact (Acres)	USACE perm impact (feet)	CDFW/ RWQCB perm impact (acres)	CDFW/ RWQCB perm impact (feet)	CDFW/ RWQCB temp impact (acres)	CDFW/ RWQCB Temp impact (feet)	Cowardin Class	Class of Aquatic Resource
Drainage											
Highland Wash	33.9224 44	-116.928651	Whitewater	0	0	0.1	394	0.01	61	R4SBA	non- section10- non wetland
Smith Creek	33.9228 84	-116.925072	Whitewater	0	0	0.08	128	0.04	65	R4SBA	non- section10- non wetland
Pershing Creek	33.9225 70	-116.919933	Whitewater	0	0	0.2	230	0.03	72	R4SBA	non- section10- non wetland
Total				0	0	0.37	748	0.09	187		

R4SBJ – Riverine, Intermittent, Streambed, Intermittently Flooded based on Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, et. al., 1979).

PUSAh - Palustrine, Unconsolidated Shore, Temporary Flooded, Diked/Impounded (h)

No Rock Slope Protection within waters

6.1 Permitting Requirements

The proposed project requires temporary and permanent impacts to jurisdictional drainages and therefore, authorizations from the RWQCB and CDFW are required as described below.

6.1.1 U.S. Army Corps of Engineers

The drainages on-site have a discontinuous connection to the Whitewater River through multiple golf courses within the Coachella Valley, which are within the floodplain. The flow path eventually connects to the Whitewater River and then to the Salton Sea. USACE could assert jurisdiction as the Salton Sea is a traditional navigable water. A individual or preliminary jurisdictional permit under Section 404 is required.

The drainages onsite do not contain permanent flows and in accordance with the EPS vs Sackett ruling are not considered to be USACE jurisdictional.

6.1.2 Regional Water Quality Control Board

The project areas occur in the Colorado River RWQCB (Region 6). Under Section 401 of the CWA, the RWQCB must certify that the discharge of dredged or fill material into WUS does not violate state water quality standards.

The RWQCB also regulates impacts to WSC under the Porter Cologne Water Quality Control Act through issuance of a Construction General Permit, State General Waste Discharge Order, or Waste Discharge Requirements, depending upon the level of impact and the properties of the waterway.

Where the project has the potential to impacts WUS or WSC, the project proponent would need to obtain a Water Quality Certification. In addition to the formal application materials and fee (based on area of impact), a copy of the appropriate California Environmental Quality Act (CEQA) documentation must be included with the application.

Mitigation measures typically include replacement of, or mitigation for temporary or permanent impacts. Mitigation can be implemented through on-site restoration, the purchase of mitigation credits through an approved in-lieu fee program or similar mitigation bank. Other options can include the purchase of off-site habitat and placed into a conservation easement. It should be noted that mitigation ratios are based on in-kind habitat replacement/restoration, and ratios may be reduced if higher quality habitat is secured or created. As noted, because the impacts to the

channel are expected to be temporary, the project may mitigate on-site through restoration efforts, which would require monitoring and maintenance of the habitat.

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6.1.3 California Department of Fish and Wildlife

A 1602 Streambed Alteration Agreement is required for all activities that alter streams and lakes and their associated riparian habitat, regardless of the extent of impacts. In addition to the formal application materials and fee (based on cost of the project), a copy of the appropriate CEQA documentation must be included with the application.

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APPENDIX A

JURISDICTIONAL MAPS



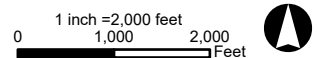
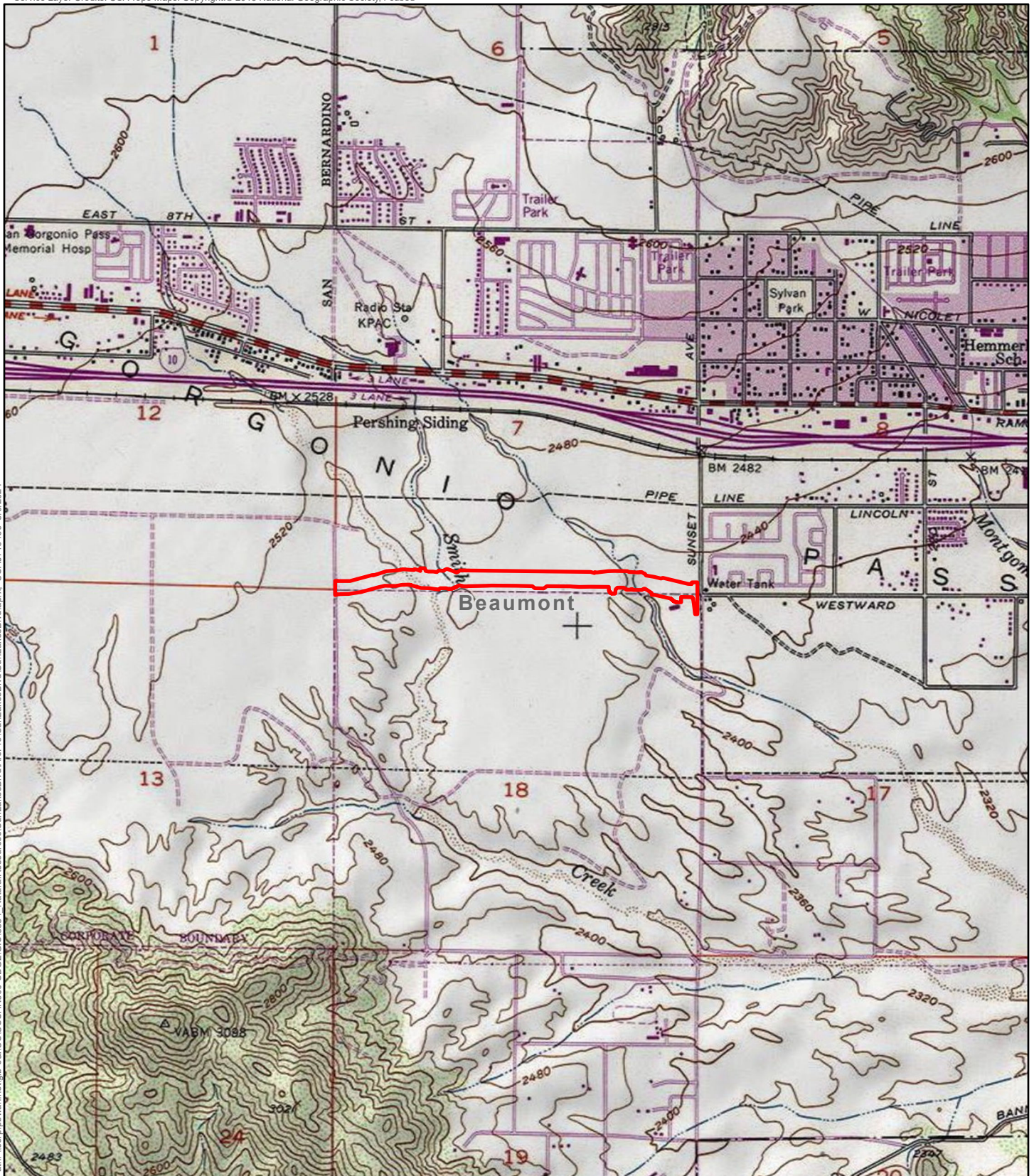
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 Project Alignment

0 1 2 Miles
1 inch = 2 miles

FIGURE 1
Project Vicinity and Location
Jurisdictional Delineation Report
Sun Lakes Blvd. Realignment Project
Banning, CA



 Project Alignment

FIGURE 2
USGS 7.5' Topo Quad: Beaumont
Jurisdictional Delineation Report
Sun Lakes Blvd. Realignment Project
Banning, CA



- GyD2: Greenfield sandy loam, 8 to 15 percent slopes, eroded
- RaB2: Ramona sandy loam, 2 to 5 percent slopes, eroded
- RaD3: Ramona sandy loam, 8 to 15 percent slopes, severely eroded
- RsC: Riverwash
- TeG: Terrace escarpments
- Project Alignment

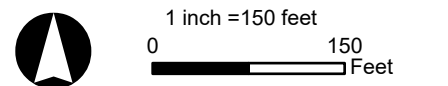
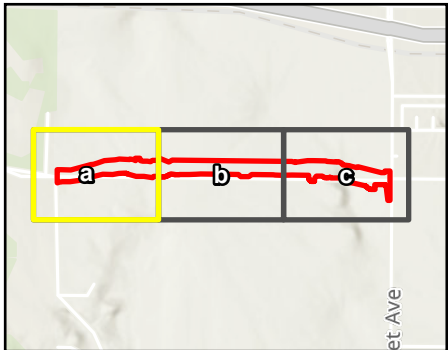


FIGURE 3a
Soil Types
Jurisdictional Delineation Report
Sun Lakes Blvd. Realignment Project
Banning, CA



Service Layer Credits: World Imagery: County of San Bernardino, Maxar World Topographic Map: UC Riverside, County of Riverside, California State Parks, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc., METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA,



- GyD2: Greenfield sandy loam, 8 to 15 percent slopes, eroded
- RaB2: Ramona sandy loam, 2 to 5 percent slopes, eroded
- RaD3: Ramona sandy loam, 8 to 15 percent slopes, severely eroded
- RaE3: Ramona sandy loam, 15 to 25 percent slopes, severely eroded
- RsC: Riverwash
- Project Alignment

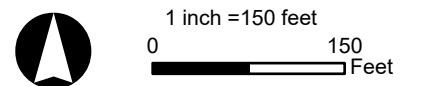
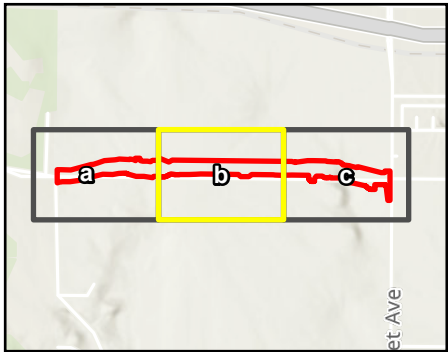


FIGURE 3b
Soil Types
Jurisdictional Delineation Report
Sun Lakes Blvd. Realignment Project
Banning, CA





- GyC2: Greenfield sandy loam, 2 to 8 percent slopes, eroded
- RaB2: Ramona sandy loam, 2 to 5 percent slopes, eroded
- RaD3: Ramona sandy loam, 8 to 15 percent slopes, severely eroded
- RaE3: Ramona sandy loam, 15 to 25 percent slopes, severely eroded
- TeG: Terrace escarpments
- Project Alignment

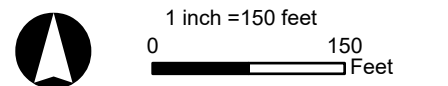
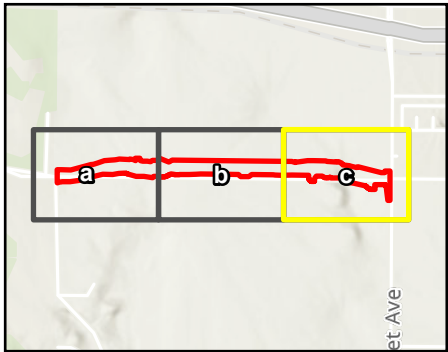
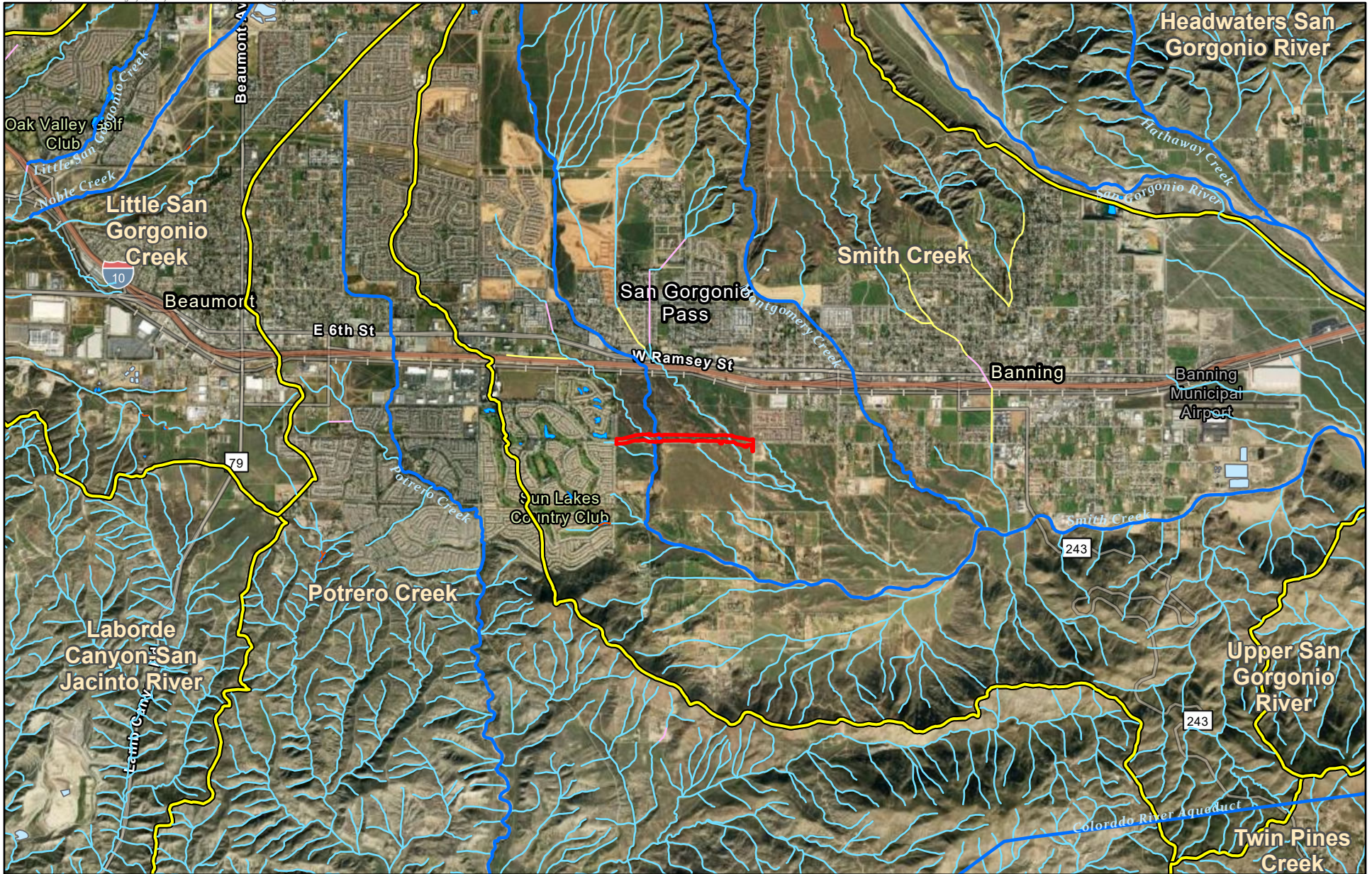


FIGURE 3c
Soil Types
Jurisdictional Delineation Report
Sun Lakes Blvd. Realignment Project
Banning, CA



Service Layer Credits: World Imagery; County of San Bernardino, Maxar World Topographic Map; UC Riverside, County of Riverside, California State Parks, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc., METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA.



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- | | |
|-----------------|-------------------|
| Connector | Named Streams |
| Canal/Ditch | Lake/Pond |
| Pipeline | Reservoir |
| Stream | Watersheds (HU12) |
| Artificial Path | Project Alignment |

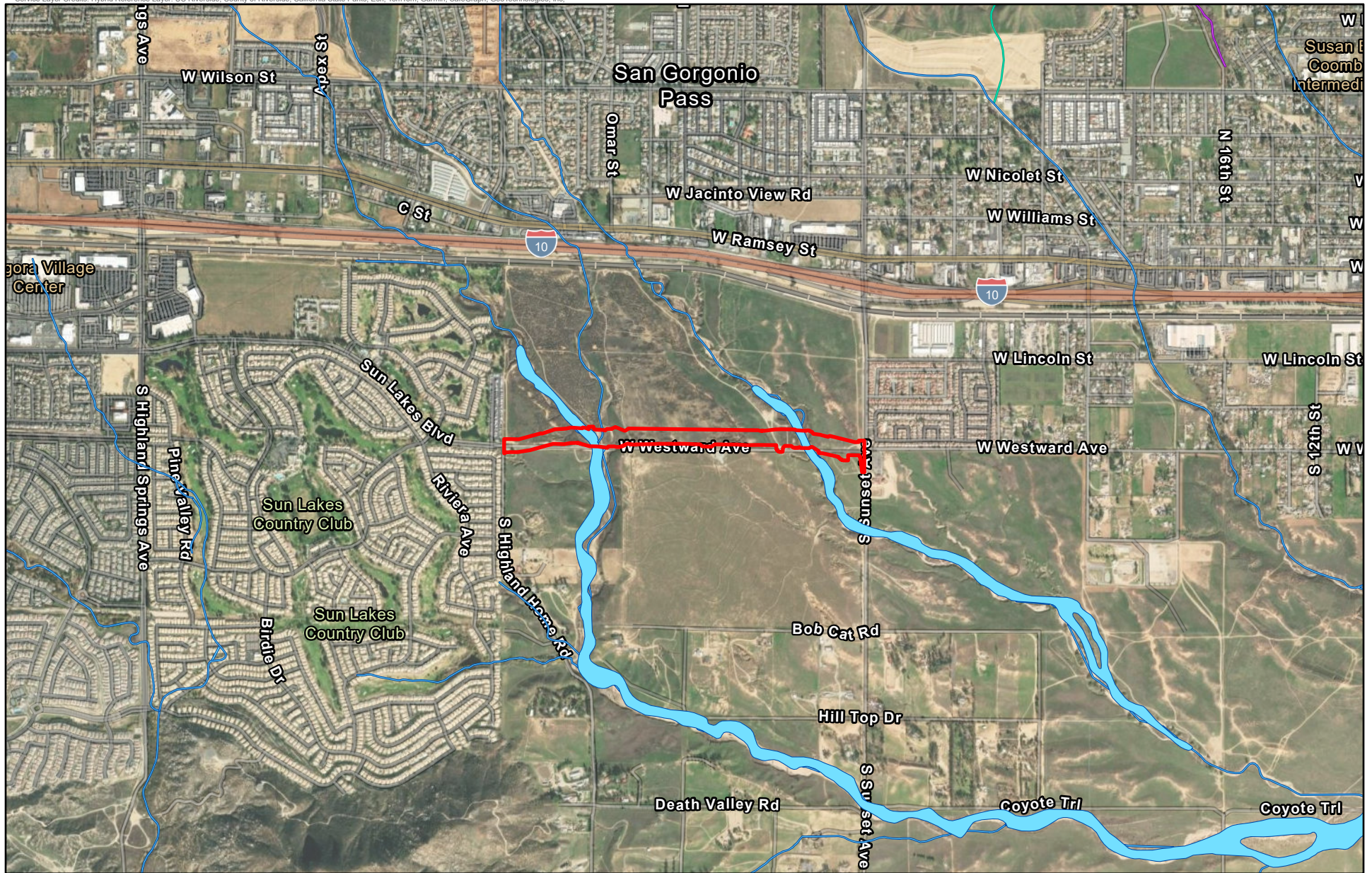
1 inch = 1 mile
0 0.5 1 Miles



FIGURE 4

Hydrology
Jurisdictional Delineation Report
Sun Lakes Blvd. Realignment Project
Banning, CA





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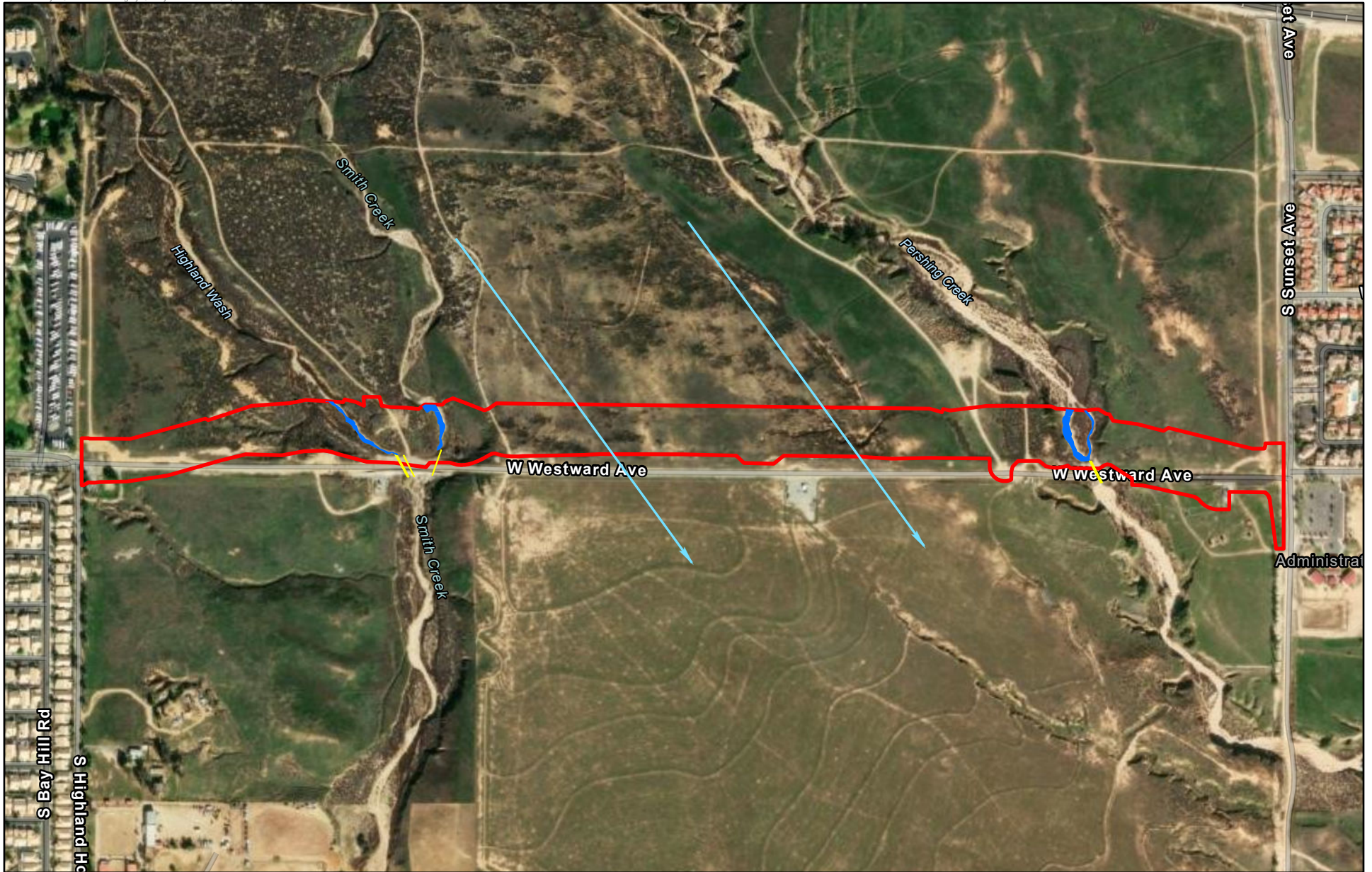
- ▬ Project Alignment
- ▬ Freshwater Emergent Wetland
- ▬ Freshwater Forested/Shrub Wetland
- ▬ Riverine

1 inch = 2,000 feet
0 1,000 2,000 Feet



FIGURE 5

NWI
Jurisdictional Delineation Report
Sun Lakes Blvd. Realignment Project
Banning, CA



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- Flow Direction
- Project Alignment
- Existing Culvert
- CDFW/RWQCB Jurisdiction

1 inch = 600 feet
0 300 600 Feet



FIGURE 6

Jurisdictional Delineation
Jurisdictional Delineation Report
Sun Lakes Blvd. Realignment Project
Banning, CA

APPENDIX B

SITE PHOTOGRAPHS



Photo 1: Looking downstream Highland Creek showing the existing road crossing and culverts.

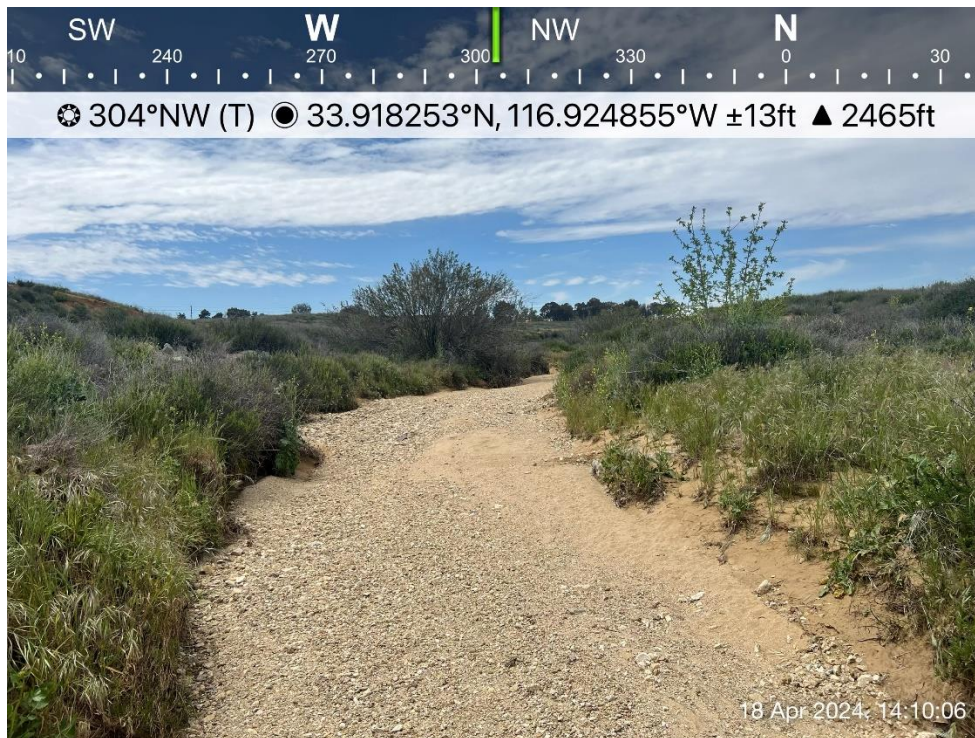


Photo 2: Looking up stream Highland Creek.

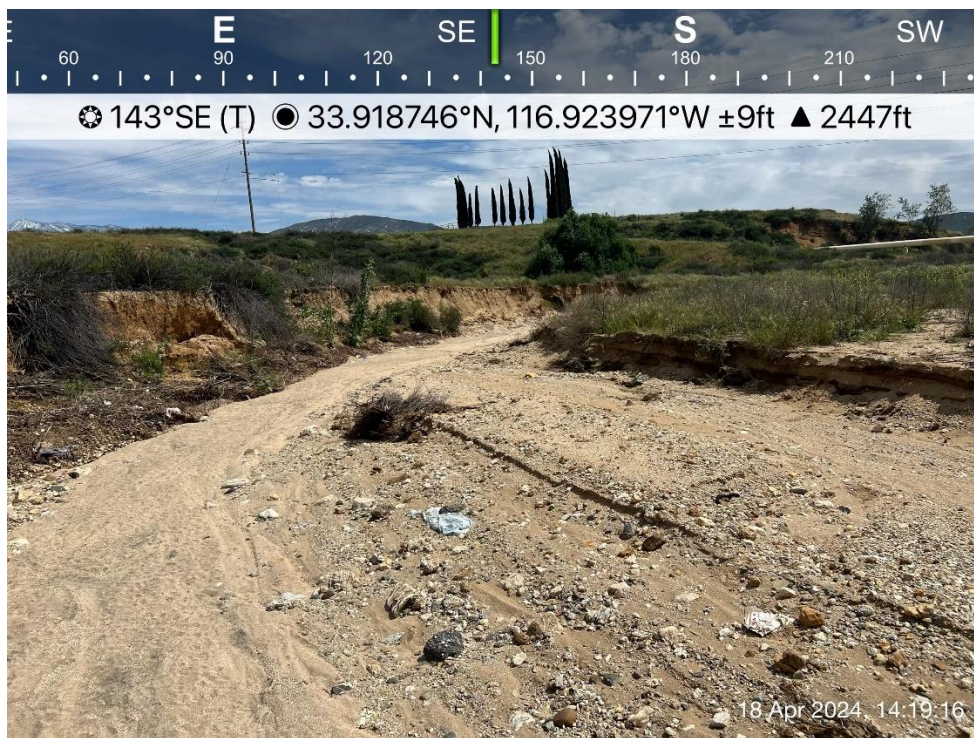


Photo 3: Looking down stream Smith Creek



Photo 4: Looking up stream Smith Creek



Photo 5: Looking down stream Pershing Creek.



Photo 6: Looking up stream Pershing Creek.

APPENDIX C

JURISDICTIONAL DELINEATION FORMS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Pierce Street Sewer & Water Extension Project City/County: Banning, Riverside Sampling Date: 4/18/2024
 Applicant/Owner: City of Banning State: CA Sampling Point: Highland Ck
 Investigator(s): Dale Hameister Section, Township, Range: S 3; T 3 South; R 1 East
 Landform (hillslope, terrace, etc.): Valley floor Local relief (concave, convex, none): None Slope (%): _____
 Subregion (LRR): _____ Lat: 34.128009 Long: --116.055896 Datum: _____
 Soil Map Unit Name: _____ NWI classification: R4SBJ

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? Are "Normal Circumstances" present? Yes ☒ 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 _____	Is the Sampled Area within a Wetland?	Yes _____ No ☒
Hydric Soil Present?	Yes _____ No ☒		
Wetland Hydrology Present?	Yes ☒ No _____		
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A/B)
1. <u>Salix lasiolepis</u>	<u>5</u>			
2. _____				
3. _____				
4. _____				
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species <u>2</u> x 2 = <u>4</u> FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: <u>2</u> (A) <u>4</u> (B) Prevalence Index = B/A = <u>.5</u>
Sapling/Shrub Stratum (Plot size: _____)				
1. <u>Eriogonum fasciculatum</u>	<u>20</u>		<u>UPL</u>	
2. <u>Corethrogyne filaginifolia</u>	<u>5</u>		<u>UPL</u>	
3. <u>Ericameria pinifolia</u>	<u>3</u>		<u>UPL</u>	
4. <u>Sambucus nigra ssp. caerulea</u>	<u>1</u>		<u>FACU</u>	
5. _____				
_____ = Total Cover				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.
Herb Stratum (Plot size: _____)				
1. <u>Bromus madritensis ssp. rubens</u>	<u>5</u>		<u>UPL</u>	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				Hydrophytic Vegetation Present? Yes ☒ No _____
Woody Vine Stratum (Plot size: _____)				
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>60</u> % Cover of Biotic Crust <u>0</u>				

Remarks:

Drainage banks contain upland species with mostly unvegetated streambed

SOIL

Sampling Point: Highland Creek

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
☐ Surface Water (A1)	☐ Salt Crust (B11)	☒ Water Marks (B1) (Riverine)
☐ High Water Table (A2)	☐ Biotic Crust (B12)	☒ Sediment Deposits (B2) (Riverine)
☐ Saturation (A3)	☐ Aquatic Invertebrates (B13)	☒ Drift Deposits (B3) (Riverine)
☐ Water Marks (B1) (Nonriverine)	☐ Hydrogen Sulfide Odor (C1)	☒ Drainage Patterns (B10)
☐ Sediment Deposits (B2) (Nonriverine)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3) (Nonriverine)	☐ Presence of Reduced Iron (C4)	☐ Crayfish Burrows (C8)
☐ Surface Soil Cracks (B6)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Water-Stained Leaves (B9)	☐ Other (Explain in Remarks)	☐ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): _____ Water Table Present? Yes ☐ No ☒ Depth (inches): _____ Saturation Present? Yes ☐ No ☒ Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes ☒ No ☐
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Pierce Street Sewer & Water Extension Project City/County: Banning, Riverside Sampling Date: 4/18/2024
Applicant/Owner: City of Banning State: CA Sampling Point: Persing Creek
Investigator(s): Dale Hameister Section, Township, Range: S 3; T 3 South; R 1 East
Landform (hillslope, terrace, etc.): Valley floor Local relief (concave, convex, none): None Slope (%): _____
Subregion (LRR): _____ Lat: 33.922444 Long: -116.928651 Datum: _____
Soil Map Unit Name: _____ NWI classification: R4SBJ

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? Are "Normal Circumstances" present? Yes ☒ 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 ☒	Is the Sampled Area within a Wetland? Yes _____ No ☒
Hydric Soil Present? Yes _____ No ☒	
Wetland Hydrology Present? Yes ☒ No _____	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	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)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				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 = _____
Sapling/Shrub Stratum (Plot size: _____)				
1. <u>Eriogonum fasciculatum</u>	<u>15</u>		<u>UPL</u>	
2. <u>Corethrogyne filaginifolia</u>	<u>10</u>		<u>UPL</u>	
3. <u>Ericameria pinifolia</u>	<u>5</u>		<u>UPL</u>	
4. _____	_____	_____	_____	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.
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: _____)				
1. <u>Bromus madritensis ssp. rubens</u>	<u>5</u>		<u>UPL</u>	
2. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No ☒
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>60</u> % Cover of Biotic Crust <u>0</u>				

Remarks:

Drainage banks contain upland species with mostly unvegetated streambed

SOILSampling Point: Persing Cre**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

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

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: 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 Soils³:

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

³Indicators 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:

Soils were dry and consist of coarse sandy loam

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? Yes _____ No ☒ Depth (inches): _____
(includes capillary fringe)**Wetland Hydrology Present?** Yes ☒ No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Pierce Street Sewer & Water Extension Project City/County: Banning, Riverside Sampling Date: 4/18/2024
Applicant/Owner: City of Banning State: CA Sampling Point: Smith Creek
Investigator(s): Dale Hameister Section, Township, Range: S 3; T 3 South; R 1 East
Landform (hillslope, terrace, etc.): Valley floor Local relief (concave, convex, none): None Slope (%): _____
Subregion (LRR): _____ Lat: 33.922444 Long: -116.928651 Datum: _____
Soil Map Unit Name: _____ NWI classification: R4SBJ

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? Are "Normal Circumstances" present? Yes ☒ 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 ☒	Is the Sampled Area within a Wetland? Yes _____ No ☒
Hydric Soil Present? Yes _____ No ☒	
Wetland Hydrology Present? Yes ☒ No _____	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	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)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				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 = _____
Sapling/Shrub Stratum (Plot size: _____)				
1. <u>Eriogonum fasciculatum</u>	<u>20</u>		<u>UPL</u>	
2. <u>Corethrogyne filaginifolia</u>	<u>5</u>		<u>UPL</u>	
3. <u>Ericameria pinifolia</u>	<u>3</u>		<u>UPL</u>	
4. <u>Sambucus nigra ssp. caerulea</u>	<u>1</u>		<u>FACU</u>	
5. _____	_____	_____	_____	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.
_____ = Total Cover				
Herb Stratum (Plot size: _____)				
1. <u>Bromus madritensis ssp. rubens</u>	<u>5</u>		<u>UPL</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No ☒
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>60</u> % Cover of Biotic Crust <u>0</u>				

Remarks:

Drainage banks contain upland species with mostly unvegetated streambed

SOILSampling Point: Smith Creel**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

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

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: 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 Soils³:

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

³Indicators 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:

Soils were dry and consist of coarse sandy loam

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? Yes _____ No ☒ Depth (inches): _____
(includes capillary fringe)**Wetland Hydrology Present?** Yes ☒ No _____

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

Remarks: