Interstate 15 Express Lanes Project Southern Extension (ELPSE)

RIVERSIDE COUNTY, CALIFORNIA
DISTRICT 8 – RIV–15 PM 20.3 TO PM 40.1
EA: RIV 08-0J0820 / ID: 08-18000063

Jurisdictional Delineation Report

Prepared for the
State of California Department of Transportation
in coordination with the Riverside County Transportation Commission

September 2021

15-RIV-08-PM 20.3 to PM 40.1

EA: RIV 08-0J0820

Traffic capacity and operational improvements would be constructed on Interstate 15 (I-15) between post miles (PM) 21.2 near Main Street in Lake Elsinore to PM 38.1 near El Cerrito Road in Corona. This area is referred to as the lane improvement limits. These lane improvements are located within Riverside County, California and run through the cities of Lake Elsinore, Corona and portions of unincorporated Riverside County including the Temescal Valley. Limits for the express lanes advance signage extend from PM 20.3 to PM 40.1 in Riverside County; these post miles constitute the overall project limits.

Jurisdictional Delineation Report

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 U.S.C 4332(2)(C) and 49 U.S.C. 303

THE STATE OF CALIFORNIA
Department of Transportation
in cooperation with
THE RIVERSIDE COUNTY TRANSPORTATION COMMISSION

_____
Date of Approval

_____
Daniel Ciacchella
District 8, Caltrans Consultant Project Manager
California Department of Transportation

10/21/21
Date of Approval

Stephanie Blanco
Capital Projects Manager (Toll)
Riverside County Transportation Commission

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Acronyms and Abbreviations

Caltrans	California Department of Transportation
CDFW	California Department of Fish and Wildlife
CWA	Clean Water Act
CFR	Code of Federal Regulations
DEC	demand exceeds capacity
FTIP	Federal Transportation Improvement Program
GIS	geographic information system
HUC	Hydrologic Unit Code
I-15 ELP	Interstate 15 Express Lanes Project
I-	Interstate
I-15 ELPSE	Interstate 15 Express Lanes Project Southern Extension
I-215	Interstate 215
JD	jurisdictional determination
JSA	jurisdictional study area
LOS	level of service
NB	northbound
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OHWM	ordinary high water mark
PM	Post Mile
Project	Interstate 15 Express Lanes Project Southern Extension
RCTC	Riverside County Transportation Commission
RTA	Riverside Transit Agency
RTP/SCS	Regional Transportation Plan / Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SB	southbound
SCAG	Southern California Association of Governments
SR	State Route
SWANCC	Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers
SWRCB	State Water Resources Control Board
TNW	traditional navigable waters
U.S.	United States
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WETS	Climate Analysis for Wetlands

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1 Introduction

This report summarizes the extent of United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW) jurisdiction pursuant to Section 404 and 401 of the Clean Water Act (CWA) and Section 1600 et seq of the California Fish and Game Code, respectively, for the Interstate 15 (I-15) Express Lanes Project Southern Extension Project (I-15 ELPSE or Project). Department of Transportation (Caltrans), is proposing to construct new lanes along Interstate 15 (I-15) between Post Mile (PM) 21.2 and PM 38.1 in Riverside County, California, in the cities of Corona, Lake Elsinore, and portions of unincorporated Riverside County (Figure 1-1 and Figure 1-2). The information provided in this report will be used to determine Project impacts on jurisdictional resources that will be included in the Natural Environment Study prepared for the Project, as well as support regulatory permitting for Project impacts on aquatic features that are potentially subject to USACE, RWQCB, and CDFW jurisdiction.

Caltrans is the lead agency under both the National Environmental Policy Act and the California Environmental Quality Act.

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Figure 1-1.
Regional Location

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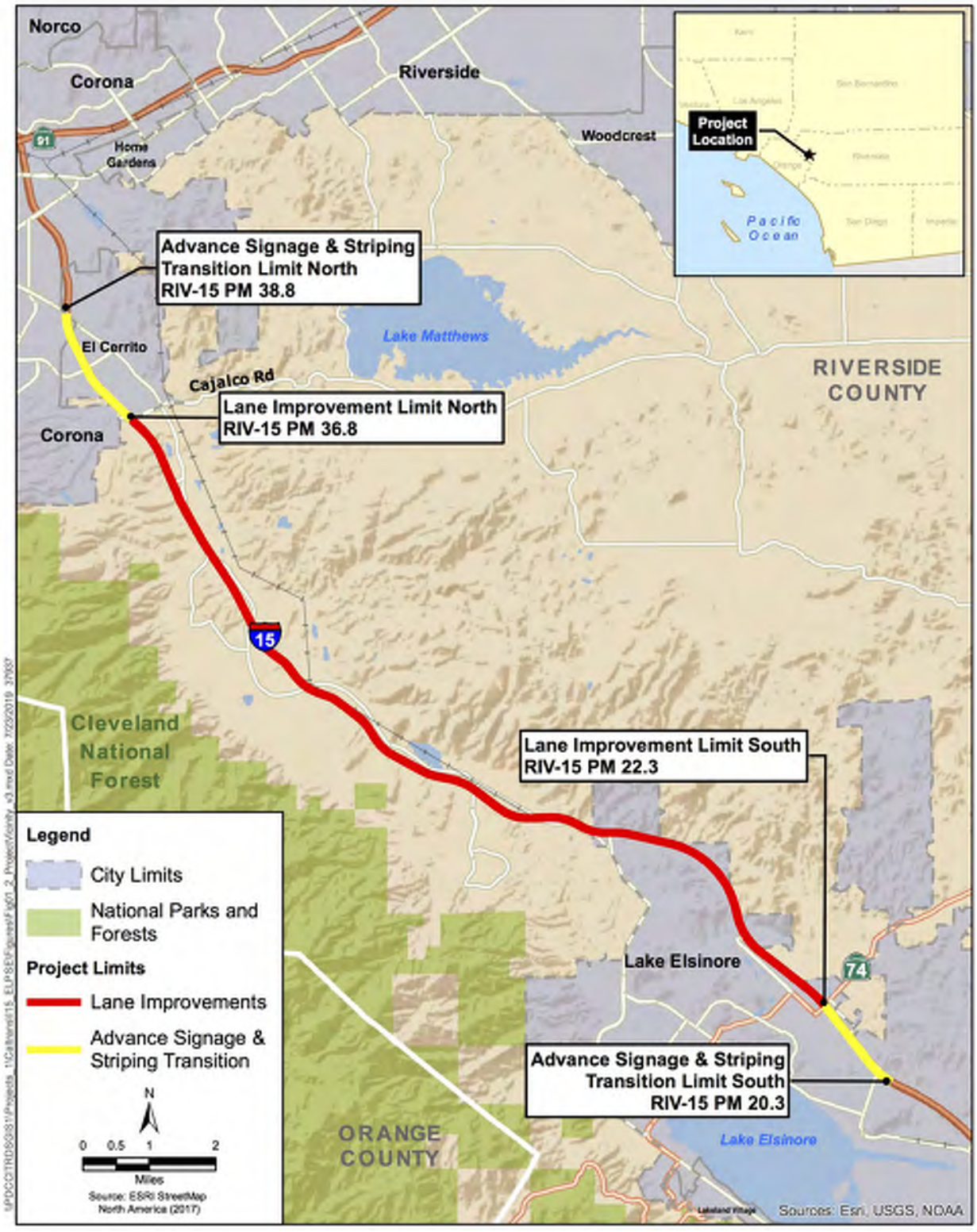

Figure 1-2.
Project Location

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2 Purpose and Need

2.1 Project Purpose

The purpose of the proposed Project is to:

- Improve and manage traffic operations, congestion, and travel times along the corridor
- Expand travel mode choice along the corridor
- Provide an option for travel time reliability
- Provide a cost-effective mobility solution
- Expand and maintain compatibility with the express lane network in the region

2.2 Project Need

Existing traffic volumes often exceed current highway capacity along several segments of I-15 between SR-74 (Central Avenue) and El Cerrito Road. Due to forecasted population growth and the continued development to support the projected growth in the region, the I-15 corridor is expected to continue to experience increased congestion and longer commute times that are projected to negatively affect traffic operations along the freeway mainline.

The adopted SCAG 2016 RTP Growth Forecast estimates a 36.7-percent increase in population in Riverside County between 2015 and 2040. SCAG's recently adopted *Connect SoCal* (2020–2045 RTP/SCS) Growth Forecast estimates a 38.3-percent increase in population in Riverside County between 2020 and 2045, with the number of households and employment increasing by approximately 30.5 percent and 34.02 percent, respectively. In the City of Corona, the 2020–2045 RTP/SCS Growth Forecast estimates an 11.6-percent increase in population from 2016 to 2045 and an 11.7-percent increase in households. According to the same source, the City of Lake Elsinore is projected to see a 76.8-percent increase in population. This projected growth is expected to place a high demand on existing transportation facilities and services.

Currently, north-south mobility options for motorists are limited through this portion of Riverside County. Besides local streets, the only parallel route for motorists is Interstate 215, which is over 10 miles east of I-15 and generally serves a different region within Riverside County. As demonstrated in the traffic analyses performed for the project, northbound I-15 currently operates at an unacceptable level of service (LOS)[1] (i.e., LOS E or F) during the AM and/or PM peak hour along 6 out of the 15 segments evaluated between the Cajalco Road off-ramp and the Indian Truck Trail on-ramp. This is projected to climb to 8 of 18 segments evaluated by 2030 between the El Cerrito Road on-ramp and the Indian Truck Trail on-ramp,

[1] The ability of a highway to accommodate traffic is typically measured in terms of LOS. Traffic flow is classified by LOS, ranging from LOS A (traffic is free flowing, with low volumes and high speeds) to LOS F (traffic volume exceeds design capacity, with forced flow and substantial delays). The LOS for signalized and unsignalized intersections is based on delay time per vehicle.

and to 19 of 20 locations evaluated within the project limits by 2050. Southbound I-15 currently operates at an unacceptable LOS (i.e., LOS E or F) during the AM and/or PM peak periods at 3 of 15 mainline segment locations evaluated between the El Cerrito Road off-ramp and the Weirick Road/Dos Lagos Drive off-ramp. This is projected to increase to five locations by 2030, and then decrease to four locations by 2050, also between the El Cerrito Road off-ramp and the Weirick Road/Dos Lagos Drive off-ramp.

The expected increase in congestion during peak periods and worsening traffic conditions, particularly during AM and PM peak periods, are expected to result in additional local and regional traffic congestion. Existing heavy peak-period congestion and traffic delays, as evidenced by the poor LOS, are expected to continue to negatively affect traffic operations along mainline I-15.

Based on the traffic analyses performed, along both northbound and southbound I-15 vehicle volume served is projected to continue to increase during the AM and PM peak periods from the existing year through 2050, as is the total distance traveled. In addition, the total travel time during the PM peak period in particular is anticipated to more than double by the Design Year (2050), with total travel time during the PM peak period forecasted to rise by 167-percent compared to the existing (2019) travel time condition. Furthermore, average delay per vehicle and total delay are projected to increase from Existing Year (2019) to Design Year (2050) during the AM and PM peak periods, at least tripling on both northbound and southbound I-15 during this timeframe.

Under Existing Conditions (2019) average speeds for northbound and southbound I-15 during the AM and PM peak hours are projected to decrease between the Existing Conditions (2019) and Design Year (2050) in all instances except during the PM peak hour in the southbound direction. These projected reductions are most pronounced on northbound I-15, ranging from a reduction of 25.5 miles per hour (mph) to 52.6 mph. The projected average delay per vehicle during this same period is expected to increase, with the northbound I-15 delay projected to increase from 774 seconds and 102 seconds during the AM and PM peak hours, respectively, under Existing Conditions (2019), to 3,828 seconds and 6,224 seconds during the AM and PM peak hours, respectively, in the Design Year (2050).

Based on the above existing and forecasted traffic data, recurring daily congestion due to continuing population growth, development, and travel demand exceeding available highway capacity is expected to continue to result in slower travel speeds, reduced throughput, and increased travel times along mainline I-15.

3 Project Description and Study Area

3.1 Project Description

RCTC), in cooperation with the Caltrans), is proposing to construct new lanes along I-15 between PM 21.2 and PM 38.1 in Riverside County, California. The primary component of the Project would be the addition of two tolled express lanes[2] in both the northbound and southbound directions within the median of I-15 from State Route 74 (SR-74) (Central Avenue) (PM 22.3) in the City of Lake Elsinore, through the unincorporated Riverside County community of Temescal Valley, to El Cerrito Road (PM 38.1) in the City of Corona, for a distance of approximately 15.8 miles. The proposed Project would also add a southbound auxiliary lane between both the Main Street (PM 21.2) off-ramp and SR-74 (Central Avenue) on-ramp (approximately 0.75 mile), and the SR-74 (Central Avenue) off-ramp and Nichols Road on-ramp (PM 23.9) (approximately 1 mile). Along with the lane additions, which would extend from PM 21.2 to 38.1, the proposed Project would include widening of up to 14 bridges, potential construction of noise barriers, retaining walls, drainage systems, and implementation of electronic toll collection equipment and signs. Associated improvements for the toll lanes, including advance signage and transition striping, would extend approximately 2 miles from each end of the express lane limits to PM 20.3 in the south and PM 40.1 in the north. The proposed lane additions and supporting infrastructure are expected to be constructed primarily within the existing State right of way. This Project is included in the 2019 Federal Transportation Improvement Program (FTIP) as Project ID RIV170901. It is also included in the Southern California Association of Governments' (SCAG) *Connect SoCal* 2020–2045 Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS) as Project ID 3160001.

The FTIP and RTP listings for this Project were amended in April 2021 to accurately reflect the scope and limits of the Project as currently proposed. The amended FTIP and RTP listings will state the following:

> *IN WESTERN RIVERSIDE COUNTY - ON I-15, ADD 2 EXPRESS LANES IN EACH DIRECTION, GENERALLY IN THE MEDIAN, FROM SR-74 (CENTRAL AVENUE) (PM 22.3) IN THE CITY OF LAKE ELSINORE TO EL CERRITO ROAD (PM 38.1) IN THE CITY OF CORONA. CONSTRUCT SOUTHBOUND AUXILIARY LANE FROM MAIN STREET (PM 21.2) TO SR-74 (CENTRAL AVENUE) (PM 22.3) AND FROM SR-74 (CENTRAL AVENUE) (PM 22.3) TO NICHOLS ROAD (PM 23.9). SIGNAGE AND TRANSITION STRIPING EXTENDS TO PM 20.3 TO THE SOUTH AND PM 40.1 TO THE NORTH.*

3.2 Jurisdictional Study Area

The jurisdictional study area (JSA) includes the footprint of disturbance for potential direct and indirect effects on jurisdictional waters that could result from the proposed Project alternatives. The JSA was determined using the limits of disturbance and a 50-foot buffer on all sides (Figure 3-1). Advance signage and striping transition areas were not included in the JSA. The JSA spans the Cities of Corona and Lake Elsinore as well as portions of unincorporated Riverside County. The JSA is located on the United States Geological Survey (USGS) *Corona South, Lake Mathews, Alberhill* and *Lake Elsinore, California* 7.5-

[2] Express lanes are traffic lanes that are separated from general purpose lanes where users are charged a toll to use the lanes.

minute series topographical quadrangles (Figure 3-1) (USGS 1967a, 1967b, 1954 and 1953). All accessible areas within the JSA were surveyed on foot. Areas that were not accessible, due to safety, locked gates, or fences/walls, were observed from the nearest possible vantage point in the field using binoculars, or by viewing aerial photographs.

Following completion of the field studies conducted for this report, the limits of disturbance were refined to reflect the latest project design, which included parcels which have been subsequently relinquished by Caltrans. In addition, due to the refinements of the limits of disturbance since the JSA surveys, the JSA mapping may not reflect the 50-foot buffer that was standard from the limits of disturbance in all areas. In the instances where the limits of disturbance extended beyond the original JSA survey area, aerial photographs were reviewed to verify that these areas did not support any additional potential jurisdictional features and is consistent with the findings of the Natural Environment Study prepared for this Project.

Figure 3-1.
Jurisdictional Study Area: Map 1

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Figure 3-1.
Jurisdictional Study Area: Map 2

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Figure 3-1.
Jurisdictional Study Area: Map 3

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Figure 3-1.
Jurisdictional Study Area: Map 4

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4 Regulatory Setting

4.1 Clean Water Act

4.1.1 United States Army Corps of Engineers

Section 404 of the CWA establishes a program for USACE to regulate the discharge of dredge and fill material into waters of the United States (U.S.), including wetlands. Activities regulated under this program include fills for development, water resource projects (e.g., dams and levees), infrastructure development (e.g., highways and airports), and conversion of wetlands to uplands for farming and forestry. Either an individual Section 404 permit or authorization to use an existing USACE nationwide permit must be obtained if any portion of an activity will result in dredge or fill impacts to a river or stream that has been determined to be jurisdictional under Section 404 of the CWA. When applying for a permit, a company or organization must show that they would either avoid wetlands where practicable, minimize wetland impacts, or provide compensation for any unavoidable destruction of wetlands.

On June 9, 2021, the U.S. Environmental Protection Agency (EPA) and the Department of the Army announced their intent to revise the Navigable Waters Protection Rule's definition of "waters of the United States." That rulemaking process is anticipated to take approximately two years. In the meantime, pursuant to an August 30, 2021 U.S. District Court for the District of Arizona order vacating and remanding the Navigable Waters Protection Rule (*Pascua Yaqui Tribe v. U.S. Environmental Protection Agency),* EPA and U.S. Army Corps of Engineers have halted implementation of the Navigable Waters Protection Rule that became effective on June 22, 2020 and are interpreting "waters of the United States" consistent with the pre-2015 regulatory regime until further notice. The term "waters of the U.S." is defined in the USACE regulations at 33 Code of Federal Regulations (CFR) Part 328.3(a) as:

- All waters which are 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;
- All interstate waters including interstate wetlands;
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters;
- Which or could be used by interstate or foreign travelers for recreation or other purposes; or
- From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
- Which are used or could be used for industrial purpose by industries in interstate commerce;
- All impoundments of waters otherwise defined as Waters of the U.S. under the definition;
- Tributaries of waters identified in paragraphs (a) (1) through (4) of this section;
- The territorial seas;
- Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1) through (6) of this section; and
- Waters of the U.S. do not include prior converted cropland.

The limits of USACE jurisdiction in non-tidal waters extends to the ordinary high water mark (OHWM) which is defined at 33 CFR 328.3(e) as:

> "…that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impresses on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas."

Per USACE Regulatory Guidance Letter 08-02, when applying for a Section 404 permit, applicants may choose to proceed under the assumption that all drainage features that exhibit an OHWM within a project footprint are subject to regulation if a discharge of fill is proposed. This assumption is considered a preliminary Jurisdictional Determination (JD). Alternatively, applicants may request an approved JD, which is USACE's concurrence that the jurisdictional delineation's findings are correct and is an official USACE determination that jurisdictional aquatic resources are present or absent from the subject site. An approved JD is typically valid for up to five years and allows for the USACE to exclude features that they have reviewed and deemed non-jurisdictional. The use of a preliminary JD may expedite the permitting process when compared to the approved JD process which requires the JD to be coordinated with the U.S. Environmental Protection Agency.

Wetlands

The term "wetlands" (a subset of "waters of the United States") is defined at 33 Code of Federal Regulations 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."

In 1987, the Corps published a manual to guide its field personnel in determining jurisdictional wetland boundaries followed by the Arid West Supplement in 2008. The methodology set forth in the 1987 *Wetland Delineation Manual* (Environmental Laboratory 1987) and the *Arid West Supplement* (USACE 2008a) generally requires that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area must exhibit at least minimal hydric characteristics. While the manual provides great detail in methodology and allows for varying special conditions, a wetland should normally meet each of the following three criteria:

- The plant community must be determined to by hydrophytic based on: (1) the dominance test applied using the 50/20 rule[3], or (2) where the vegetation fails the dominance test and wetland hydrology and hydric soils are present, vegetation is determined to be hydrophytic using the Prevalence Index test [4] based upon the indicator status (i.e., rated as facultative or wetter) in the *National List of Plant Species that Occur in Wetlands* (Reed 1988);

[3] If a particular species accounts for more than 50 percent of the total coverage of vegetation in the stratum, or for at least 20 percent of the total coverage in the stratum in which the species was found, that species is defined as dominant.

[4] A Prevalence Index is calculated using wetland indicator status and relative abundance for each vascular plant species present.

- Soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., redoximorphic features with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and
- Hydrologic characteristics must indicate that the ground is saturated to within 12 inches of the surface for a sufficient period to cause: (1) the formation of hydric soils; and (2) establishment of a hydrophytic plant community. A positive test for wetland hydrology is based on the presence of one primary or two secondary indicators.

Supreme Court Decisions

Solid Waste Agency

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*. (SWANCC) with respect to whether USACE could assert jurisdiction over isolated waters. The Solid Waste Agency of North Cook County ruling stated that 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 traditional navigable waters, wetlands adjacent to traditional navigable waters, non-navigable tributaries of traditional navigable waters that are relatively permanent 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 traditional navigable water: non-navigable tributaries that are not relatively permanent, wetlands adjacent to non-navigable tributaries that are not relatively permanent, and wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary.

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 traditional navigable waters. 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 snow pack. 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.

According to a USACE guidance document (USACE 2008b) the USACE generally will not assert jurisdiction over the following features: swales or erosional features (e.g., gullies, small washes

characterized by low volume, infrequent, or short duration flow) and ditches (including roadside ditches) excavated wholly in and draining only uplands that generally do not carry a relatively permanent flow of water.

4.1.2 Regional Water Quality Control Board

In California, the State Water Resources Control Board (SWRCB) and nine RWQCBs regulate activities within state and federal waters under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act (Porter-Cologne). The SWRCB is responsible for setting statewide policy, coordinating and supporting RWQCB efforts, and reviewing petitions that contest RWQCB actions. Each RWQCB is semiautonomous and has the authority to set water quality standards, issue Section 401 certifications and waste discharge requirements, and take enforcement action for projects occurring within its boundary. However, when a project crosses multiple RWQCB jurisdictional boundaries, the SWRCB becomes the regulating agency and issues project permits.

State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State

The SWRCB adopted a statewide definition of rules to protect wetlands and other environmentally sensitive waterways throughout the state on April 2, 2019. These rules define what SWRCB considers a wetland and include a framework for determining if a feature that meets the SWRCB wetland definition is a "water of the state," subject to regulation. Second, the rules clarify requirements for permit applications to discharge dredged or fill material to any water of the state.

The SWRCB defines 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. (SWRCB 2019).

SWRCB considers the following wetlands (as determined using methodology in the *USACE Wetland Delineation Manual* [Environmental Laboratory 1987]) as waters of the state:

1. Natural wetlands
2. Wetlands created by modification of a surface water of the state
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

d. Greater than or equal to 1 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

   xi. Maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits)

   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 numbers 2, 3.a, 3.b, or 3.c are not waters of the state. If an aquatic feature meets the wetland definition, the burden is on the applicant to demonstrate that the wetland is not a water of the state.

Section 401 of the Clean Water Act

Section 401 specifies that certification from the state is required for any applicant requesting a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities that may result in any discharge into waters of the U.S. A federal permit or license cannot be issued that may result in a discharge to waters of the U.S. unless certification under Section 401 of the CWA is granted or waived by the U.S. Environmental Protection Agency, state, or tribe where the discharge would originate. The Project JSA is within the boundaries of the Santa Ana RWQCB (Region 9), which would have the authority to grant, grant with conditions, deny, or waive certification for the Project.

Under Section 401, all activities regulated at the federal level by USACE are also regulated at the state level. Therefore, state jurisdiction usually includes all waters or tributaries to waters that are determined to be waters of the U.S. and, similar to waters of the U.S., are typically delineated at the OHWM.

Porter-Cologne Water Quality Control Act

RWQCB also regulates discharge of waste to waters of the state, pursuant to California's Porter-Cologne Water Quality Control Act, enacted in 1969, which provides the legal basis for water quality regulation within California. Under this act, "waters of the state" is defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code section 13050(e)). Should RWQCB determine that discharge of pollutants (including fill) is proposed to waters that meet the definition of 'waters of the state' but not 'waters of the U.S.', waste discharge requirements may be required.

Water Quality Order No. 2004-0004-DWQ

Water Quality Order No. 2004-0004-DWG (SWRCB 2020) provides a General Order for Waste Discharge Requirements for ephemeral waters that are not regulated by USACE, particularly those excluded from USACE jurisdiction following issuance of the Navigable Waters Protection Rule. This General Order provides that if a project is only impacting ephemeral waters that are no longer regulated as Waters of the U.S. per the Navigable Waters Protection Act, and impacts are less than 0.2 acre and 400 linear feet, Water Quality Certification can be attained through the submittal of a Notice of Intent to utilize this existing General Order. So long as the RWQCB Executive Officer or the SWRCB Executive Director has not issued a Notice of Exclusion within 45 days of receiving a complete and accurate Notice of Intent, the discharge may proceed.

4.2 California Department of Fish and Wildlife

CDFW, through provisions of the California Fish and Game Code (Section 1600 et seq.), issues agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. 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 jurisdiction includes ephemeral, intermittent and perennial watercourses and extends to the top of the bank of a stream or lake if unvegetated, or to the limit of the adjacent riparian habitat located contiguous to the watercourse if the stream or lake is vegetated.

5 Methodology

5.1 Literature Review

The following literature and materials were reviewed both prior to conducting delineation fieldwork and in the process of determining jurisdictional status of features identified in the field:

- Current and historical aerial photographs of the Project site to determine the potential locations of waters of the U.S. and riparian areas (ICF 2020, GoogleEarth 2020; NETR Online 2020);
- U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) soil mapping data (NRCS 2021a);
- USGS topographical maps to determine the current or historical presence of any "blue line" drainages or other mapped water features [*Corona South, Lake Mathews, Alberhill,* and *Lake Elsinore* (USGS 1967a, 1967b, 1954, and 1953);
- Precipitation and Climate Data for Riverside County - Elsinore, CA (Station 06065) Climate Analysis for Wetlands (WETS) Tables (NRCS 2021b);
- USACE's Antecedent Precipitation Tool was used to document antecedent precipitation conditions for the time of the delineation (USACE 2021);
- National Hydrography Dataset Online Mapper (USGS 2020);
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) data to identify areas mapped as wetland features (USFWS 2020); and
- City of Corona Storm Drain Atlas (City of Corona 2013).

5.2 Field Investigation

Field surveys of the JSA were conducted by RCTC consultant biologists Sarah Barrera, Allegra Engleson, Aaron Newton, Rebecca Schartau, and Ingrid Eich in August and December 2020 and February 2021 (Table 5-1).

Table 5-1. Survey Dates and Field Personnel

Survey Date	Personnel
August 11, 2020	SB, AE, AN, RS
August 12, 2020	SB, AE, AN, RS
August 13, 2020	SB, AE, AN, RS
August 25, 2020	SB, AE, AN, RS
August 26, 2020	SB, AE, AN, RS
August 27, 2020	SB, RS, IE

Table 5-1. Survey Dates and Field Personnel

Survey Date	Personnel
December 14, 2020	RS
February 8, 2021	SB, RS

[1] SB: Sarah Barrera; AE: Allegra Engleson; AN: Aaron Newton; RS: Rebecca Schartau; IE: Ingrid Eich

The JSA was established to capture drainages within and adjacent to the limits of disturbance. All potential drainage features in accessible areas within the JSA were investigated on foot. Potential drainage features within the JSA that were not accessible were viewed in the field using binoculars, if possible, and reviewed and mapped using aerial photography. Feature names used in this report were determined based on the feature location in reference to I-15 PM values. Where a feature was named on topographic mapping, the mapped name of the feature was also included.

5.2.1 U.S. Army Corps of Engineers Jurisdiction

Features within the JSA were assessed to identify potential presence of USACE waters of the U.S., including wetlands, according to the methods outlined in the *USACE Wetland Delineation Manual* (Environmental Laboratory 1987), the *Regional Supplement to the USACE Wetland Delineation Manual: Arid West Region (Version 2.0)* (USACE 2008b), and *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2008c).In addition, vegetation types (i.e. typically upland or hydrophytic/riparian species), hydrology indicators, and historic aerial photographs within aquatic features were studied in support of establishing the hydrologic regime of potential aquatic features within the JSA. Aquatic features were considered ephemeral if they did not support evidence of surface flows for at least two weeks (e.g. inundation on aerial photographs more than two weeks after a substantial precipitation event, hydrophytic vegetation, cracked soils, algae, coarse substrates). Features that supported evidence of surface flows for at least two weeks were identified as intermittent or perennial.

The USACE's Antecedent Precipitation Tool was used to document antecedent precipitation conditions for the time of the delineation. Antecedent precipitation is defined as precipitation occurring onsite prior to the field review. Antecedent precipitation helps to determine whether the site review is conducted during "normal environmental conditions" for that time of year. The Antecedent Precipitation Tool compares precipitation that occurred in the three months prior to the field assessment and compares that to the range of precipitation observed in the local region over a 30-year period. Antecedent precipitation scores of 6 to 9 are considered "dry," 10 to 14 "normal," and 15 to 18 "wet" (Sprecher and Warne 2000). The Primary Station identified by the Antecedent Precipitation Tool was Ontario International Airport, approximately 17 miles northwest of the JSA.

When linear potential waters of the U.S. were encountered, the length of the drainage feature was walked and the outer jurisdictional limits within the JSA were recorded on 1:2,400 -scale 0.3-meter resolution 2020 aerial maps, where visible on the aerial photography, or widths were recorded (in feet) with an ESRI Collector for ArcGIS application on iOS and Android phones connected to a global positioning system recorder with submeter accuracy. The OHWM was measured at locations where transitions were

apparent. Other data recorded included bank-to-bank width, bank height and morphology, substrate type, flow regime, and all vegetation within and adjacent to the feature.

Thirty-three (33) Wetland Determination Data Forms were completed throughout the JSA in areas exhibiting potential wetland conditions. Two or more (i.e. paired) wetland data points were assessed in areas where changes in observed wetland characteristics were not associated with an abrupt topographic change. Where potential wetland boundaries were obvious due to abrupt topographic and vegetation changes (i.e., switch from vegetated to bare ground), a single data point was collected to confirm the presence or absence of wetland within the well-defined aquatic feature being assessed. Wetland status of plant species was determined by using the *2018 Arid West Regional Wetland Plant List* (USACE 2018). Soils were analyzed using the Natural Resources Conservation Service 2010 Field Indicators of Hydric Soils in the United States, Version 7.0 (U.S. Department of Agriculture Natural Resources Conservation 2010) and Munsell Soil Color Chart (Munsell Color 2010). Results of wetland assessments are discussed in Section 6.2 under Potential Wetland Waters of the U.S. and Wetland Determination Data Forms are provided in Appendix A.

Wetland status for areas where access was not available for biologists to conduct soil pits was determined based on a review of aerial photography and existing NWI wetland mapping and NRCS soil maps. Notes regarding these circumstances are included in the applicable Wetland Determination Data Forms in Appendix A.

5.2.2 Regional Water Quality Control Board Jurisdiction

Waters of the state, as defined by the SWRCB's State Wetland Definition and Procedures for Discharges of Dredged or Fill Materials to Waters of the State, include potential jurisdictional waters of the U.S. as well as some isolated features not regulated by USACE. RWQCB jurisdiction, for the purposes of CWA Section 401 Certification, is identical to USACE jurisdiction. In addition, the JSA was evaluated for isolated features that would not be subject to federal jurisdiction but would be potentially regulated under Porter-Cologne as waters of the state.

Data for potential Waters of the State was collected pursuant to the same methodology used for waters of the U.S. Constructed, ephemeral features that were positioned in the freeway median, gore areas, interchange areas, or other areas where features were clearly constructed in uplands in order to convey roadway runoff, which also did not exhibit more than minimal (if any) functions and values for wildlife resources, were not considered jurisdictional Waters of the State.

5.2.3 California Department of Fish and Wildlife Jurisdiction

Features potentially subject to CDFW jurisdiction were mapped from top of bank to top of bank or to the extent of riparian vegetation, whichever was greater. Constructed, ephemeral features that were positioned in the freeway median, gore areas, interchange areas, or other areas where features were clearly constructed in uplands in order to convey roadway runoff, which also did not exhibit more than minimal (if any) functions and values for wildlife resources (i.e. riparian habitat or aquatic characteristics) were not considered jurisdictional.

Upon completion of fieldwork, all data collected in the field were incorporated into a geographic information system (GIS) along with topography, National Hydrography Dataset features and aerial

photographs. The GIS data was then used to quantify the extent of potential jurisdictional features within the JSA.

5.2.4 Vegetation

Vegetation communities associated with jurisdictional features within the JSA were mapped in the field and verified with data collected by ICF in 2020 in support of the Natural Environment Study Report prepared for the I-15 ELPSE. Fieldwork was conducted in 2020 and vegetation communities were mapped according to *A Manual of California Vegetation,* second edition (Sawyer et al. 2009).

6 Results

6.1 Environmental Setting

The JSA is located within southwestern Riverside County and consists of a developed freeway corridor that connects the Cities of Riverside and Corona to Lake Elsinore and San Diego County. Temescal Wash, a riparian stream corridor that conveys flows from Lake Elsinore to the Santa Ana River, runs parallel to the JSA. Prior to development, drainages from the adjacent Santa Ana Mountains and Gavilan Hills drained into Temescal Wash. With increased agricultural, residential, and commercial development, these drainages were channelized for flood control purposes. Construction of I-15 and high levels of residential and urban development within the JSA have resulted in removal of most of the natural vegetation and modification, to some extent, of all historically-present drainage features within the JSA.

6.1.1 Climate and Precipitation

Riverside County has a Mediterranean climate, characterized by warm, dry summers and cool, moist winters. Average annual precipitation for the Elsinore WETS station between 1990 and 2019 was 11.1 inches with most of the annual rainfall occurring between November and April (NRCS 2020).

Antecedent precipitation for the JSA was identified as normal at the time the surveys were conducted in September 2020 (Antecedent Precipitation Score of 14; Dry Season) and February 2021 (Antecedent Precipitation Score of 11) (USACE 2021).

6.1.2 General Vegetation

The majority of the JSA is paved or developed with disturbed areas supporting ornamental or ruderal vegetation. For the most part, plants within the JSA consist of weedy, non-native species such as non-native grasses, and planted trees such as eucalyptus (*Eucalyptus* sp.) or Peruvian pepper (*Schinus molle*). Hillsides adjacent to I-15, and some earthen drainages within the JSA that have not been substantially disturbed, support native scrub species, such as California buckwheat (*Eriogonum fasciculatum*) and brittlebush (*Encelia farinosa*). Earthen portions of Temescal Wash, flood control basins, and other unnamed drainages with intermittent or perennial flows support riparian vegetation typically associated with wet streams in southern California. Vegetation community types identified within the JSA are listed below and are shown in maps provided in Appendix B.

- Agricultural
- Arrow Weed Thickets (*Pluchea sericea* Shrubland Alliance)
- Brittle Bush Scrub (*Encelia farinosa* Shrubland Alliance)
- Broom Scale Scrub (*Lepidospartum squamatum* Shrubland Alliance)
- Bush Penstemon Scrub (*Keckiella antirrhinoides* Shrubland Alliance)
- California Buckwheat Scrub (*Eriogonum fasciculatum* Shrubland Alliance)
- California Sagebrush - California Buckwheat Scrub (*Artemisia californica - Eriogonum Fasciculatum* Shrubland Alliance)

- California Sycamore Woodlands (*Platanus racemosa - Quercus agrifolia* Woodland Alliance)
- Coast Live Oak Woodland and Forest (*Quercus agrifolia* Forest and Woodland Alliance)
- Deer Weed Scrub (*Acmispon glaber* Shrubland Alliance)
- Developed
- Disturbed
- Eucalyptus - Tree of Heaven - Black Locust Groves (*Eucalyptus spp. - Ailanthus altissima - Robinia pseudoacacia* Woodland)
- Fremont Cottonwood Forest and Woodland (*Populus fremontii - Fraxinus velutina - Salix gooddingii* Forest and Woodland Alliance)
- Goodding's Willow-Red Willow Riparian Woodland and Forest (*Salix gooddingii - Salix laevigata* Forest and Woodland Alliance)
- Hardstem and California Bullrush Marshes (*Schoenoplectus (acutus, californicus)* Herbaceous Alliance)
- Holly Leaf Cherry - Toyon - Greenbark Ceanothus Chaparral (*Prunus ilicifolia - Heteromeles arbutifolia - Ceanothus spinosus*)
- Mulefat Thickets (*Baccharis salicifolia* Shrubland Alliance)
- Needle grass - Melic grass grassland (*Nassella spp. - Melica spp.* Herbaceous Alliance)
- Quailbush Scrub (*Atriplex lentiformis* Shrubland Alliance)
- Salt Grass Flats (*Distichlis spicata* Herbaceous Alliance)
- Scrub Oak Chaparral (*Quercus berberidifolia* Shrubland Alliance)
- Tamarisk Thickets *(Tamarix* spp. Shrubland Semi-Natural Alliance)
- Tarweed Fields (*Deinandra* spp. Herbaceous Alliance)
- Upland Mustards or Star-Thistle Fields (*Brassica nigra - Centaurea (solstitialis, melitensis)* Herbaceous Semi-Natural Alliance)
- Wild Oats and Annual Brome Grasslands (*Avena spp. - Bromus spp.* Herbaceous Semi-Natural Alliance)
- Wild Tarragon Patches (*Artemisia dracunculus* Herbaceous Alliance)[5]

[5] Vegetation classification and mapping was provided by ICF, as documented in the Natural Environment Study prepared for this project. The limits of wetland and riparian vegetation follows mapping conducted by ICF.

6.1.3 Soils

The following information is taken from the *Soil Survey of Western Riverside Area* (United States Department of Agriculture Natural Resources Conservation Service 1971) and *Soil Survey of Orange County and Part of Western Riverside Area* (United States Department of Agriculture Natural Resources Conservation Service 1978). The Western Riverside Area is made up of the western one-third of Riverside County, located south of the San Bernardino Mountains, east of the Santa Ana Mountains, and north of the Agua Tibia and Palomar Mountains. Soils in the Western Riverside Area survey area range from nearly level to very steep and are suitable for many kinds of crops. Many areas are irrigated, however large areas are also used for dryland crops (NRCS 1971).

Soils mapped within the JSA are shown on Figure 6-1 and listed in Table 6-1. Soils within the JSA are highly disturbed and largely do not match those occurring on USGS map. Several of the soil types identified on the soil map within the JSA have hydric components, as shown in Table 6-1.

Table 6-1. Soil Types within the Jurisdictional Study Area

Soil Type	Hydric (Yes/No)
Altamont clay, 15 to 25 percent slopes, eroded	No
Altamont clay, 5 to 15 percent slopes	No
Arbuckle gravelly loam, 15 to 25 percent slopes	No
Arbuckle gravelly loam, 2 to 9 percent slopes, dry, MLRA 19	No
Arbuckle gravelly loam, 8 to 15 percent slopes	No
Arbuckle loam, 8 to 15 percent slopes	No
Badland	Yes
Cieneba rocky sandy loam, 15 to 50 percent slopes, eroded	No
Cortina cobbly loamy sand, 2 to 8 percent slopes	Yes (Riverwash component)
Cortina cobbly sandy loam, 2 to 12 percent slopes	No
Cortina gravelly coarse sandy loam, 2 to 8 percent slopes	No
Cortina gravelly loamy sand, 2 to 8 percent slopes	Yes (Riverwash and Garretson components)
Escondido fine sandy loam, 8 to 15 percent slopes, eroded	No
Garretson gravelly very fine sandy loam, 0 to 2 percent slopes	No
Garretson gravelly very fine sandy loam, 2 to 9 percent slopes	No
Garretson very fine sandy loam, 0 to 2 percent slopes	No
Garretson very fine sandy loam, 2 to 8 percent slopes	No
Gorgonio loamy sand, 0 to 8 percent slopes	No

Table 6-1. Soil Types within the Jurisdictional Study Area

Soil Type	Hydric (Yes/No)
Gorgonio loamy sand, 8 to 15 percent slopes	No
Gorgonio loamy sand, channeled, 2 to 15 percent slopes	Yes (Riverwash component)
Gullied land	No
Hanford coarse sandy loam, 2 to 8 percent slopes	No
Hanford coarse sandy loam, 8 to 15 percent slopes, eroded	No
Hanford cobbly coarse sandy loam, 2 to 15 percent slopes, eroded	Yes (Riverwash component)
Hanford loamy fine sand, 0 to 8 percent slopes	No
Honcut cobbly sandy loam, 2 to 25 percent slopes	Yes (Riverwash component)
Honcut loam, 2 to 8 percent slopes, eroded	No
Honcut sandy loam, 2 to 8 percent slopes	No
Honcut sandy loam, 8 to 15 percent slopes, eroded	No
Lodo rocky loam, 25 to 50 percent slopes, eroded	No
Lodo rocky loam, 8 to 25 percent slopes, eroded	No
Modjeska gravelly loam, 2 to 9 percent slopes	No
Modjeska gravelly loam, 9 to 15 percent slopes	No
Placentia cobbly fine sandy loam, 8 to 25 percent slope s	Yes (unnamed ponded component)
Placentia fine sandy loam, 5 to 15 percent slopes	Yes (unnamed ponded component)
Porterville clay, 0 to 8 percent slopes	No
Ramona sandy loam, 0 to 5 percent slopes, severely eroded	No
Ramona sandy loam, 15 to 25 percent slopes, severely eroded	No
Ramona sandy loam, 5 to 8 percent slopes, severely eroded	No
Ramona sandy loam, 8 to 15 percent slopes, eroded	No
Ramona sandy loam, 8 to 15 percent slopes, severely eroded	No
Riverwash	Yes
Rough broken land	No
San Emigdio loam, 2 to 8 percent slopes	No
Soper cobbly loam, 25 to 50 percent slopes, eroded	No

Table 6-1. Soil Types within the Jurisdictional Study Area

Soil Type	Hydric (Yes/No)
Temescal rocky loam, 15 to 50 percent slopes, eroded	No
Terrace escarpments	No
Tujunga gravelly loamy sand, 0 to 8 percent slopes	No
Tujunga loamy sand, channeled, 0 to 8 percent slopes	Yes (Riverwash component)
Vallecitos loam, thick solum variant, 15 to 50 percent slopes, eroded	No
Vallecitos rocky loam, 8 to 50 percent slopes, eroded	No
Waukena loamy fine sand, saline-alkali	No
Willows silty clay, saline-alkali	No
Yokohl loam, 8 to 15 percent slopes, eroded	Yes (unnamed component)
Yokohl loam, 8 to 25 percent slopes, severely eroded	Yes (unnamed component)
Yorba gravelly sandy loam, 2 to 9 percent slopes	No

Source: Soil Survey of Western Riverside Area, California (NRCS 1971)

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Figure 6-1.
Soils: Map 1

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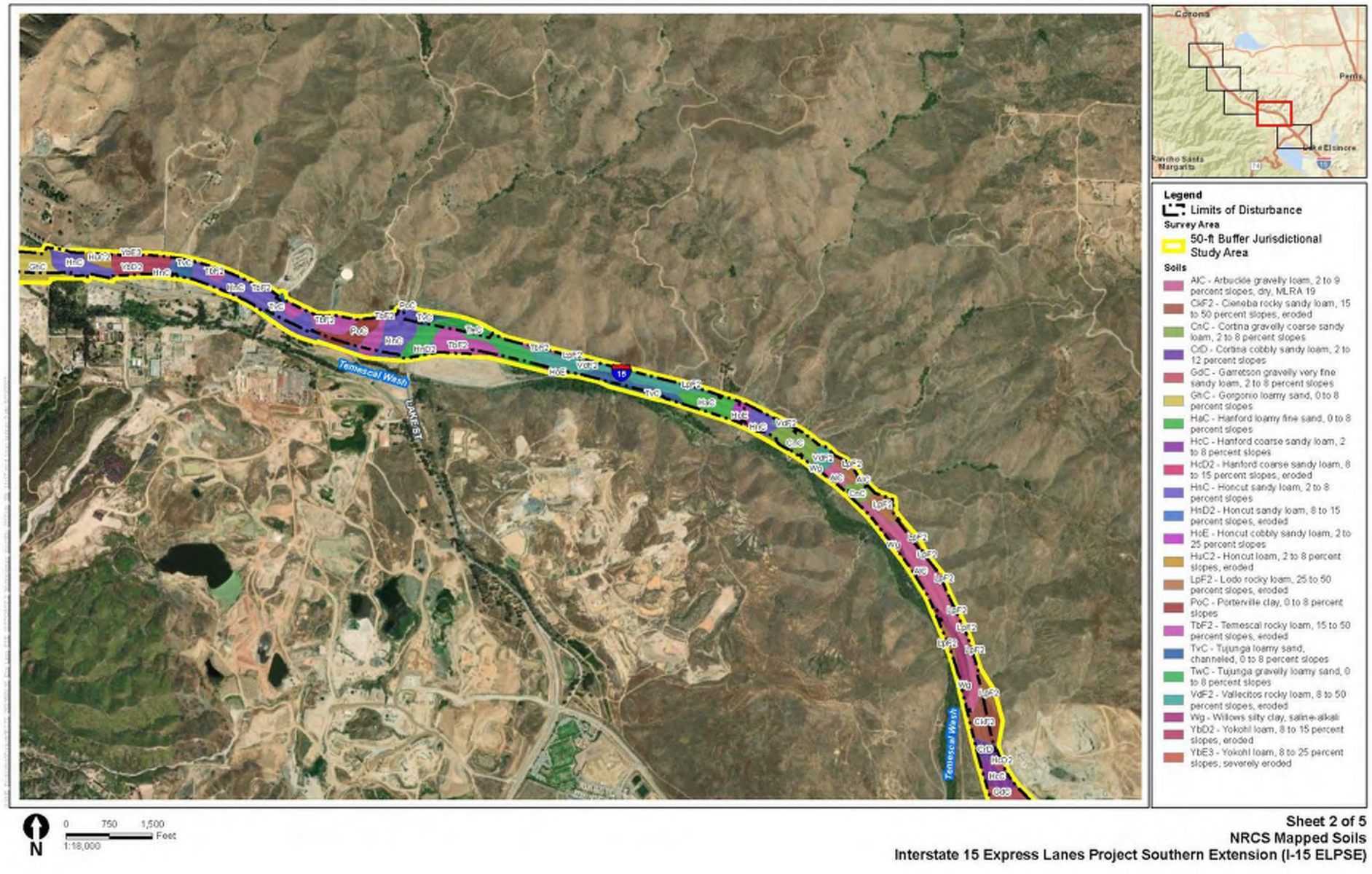

Figure 6-1.
Soils: Map 2

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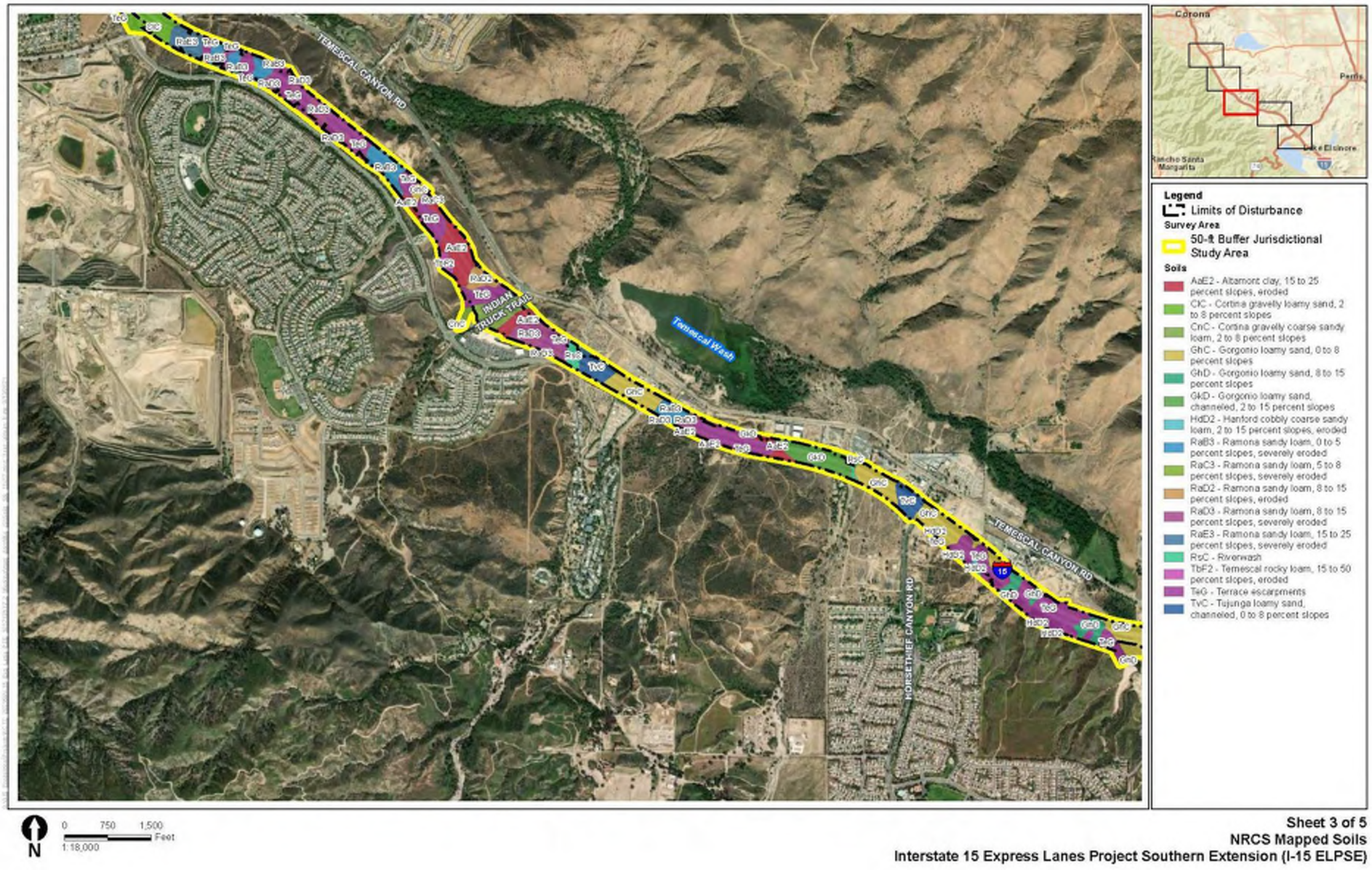

Figure 6-1.
Soils: Map 3

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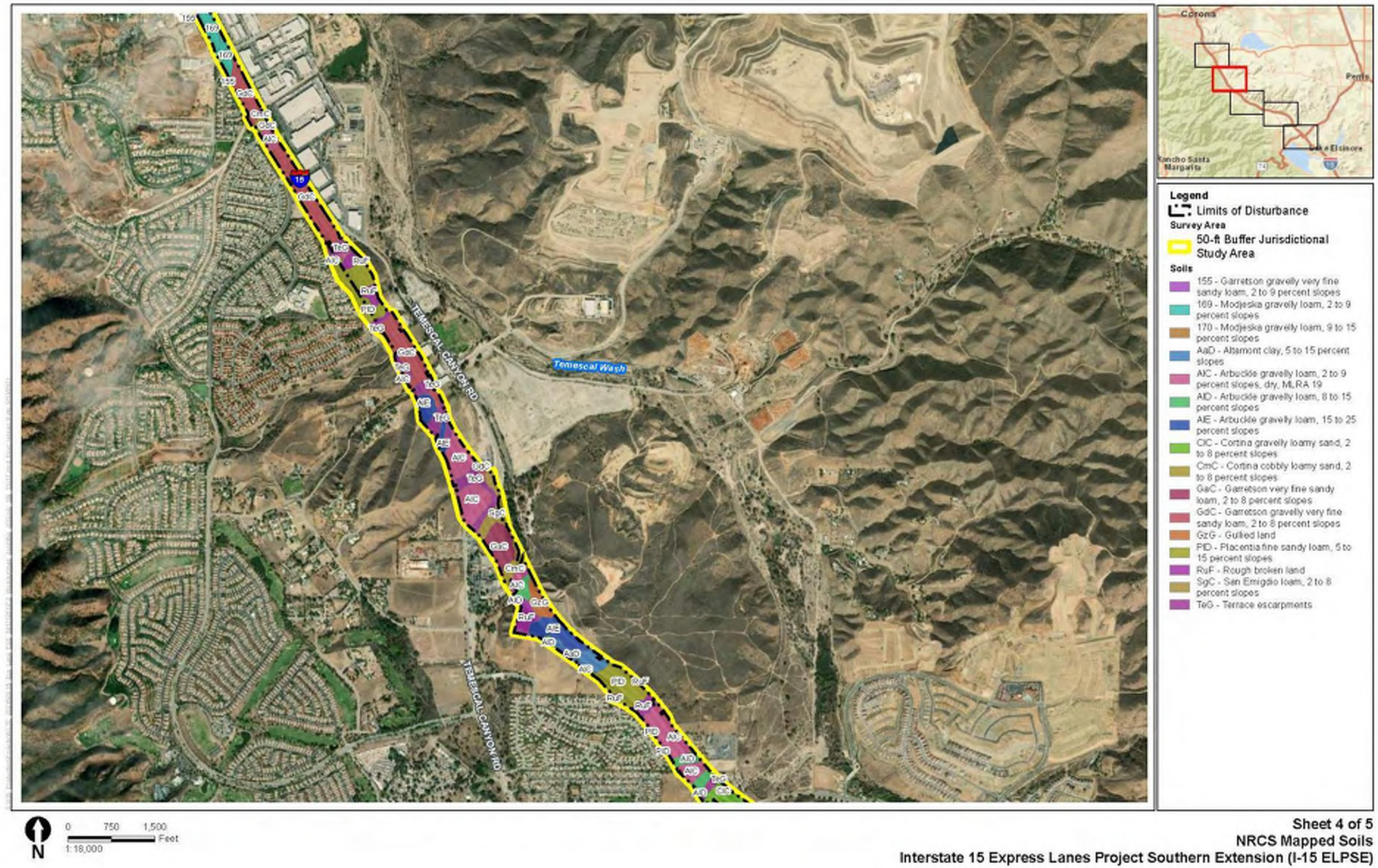

Figure 6-1.
Soils: Map 4

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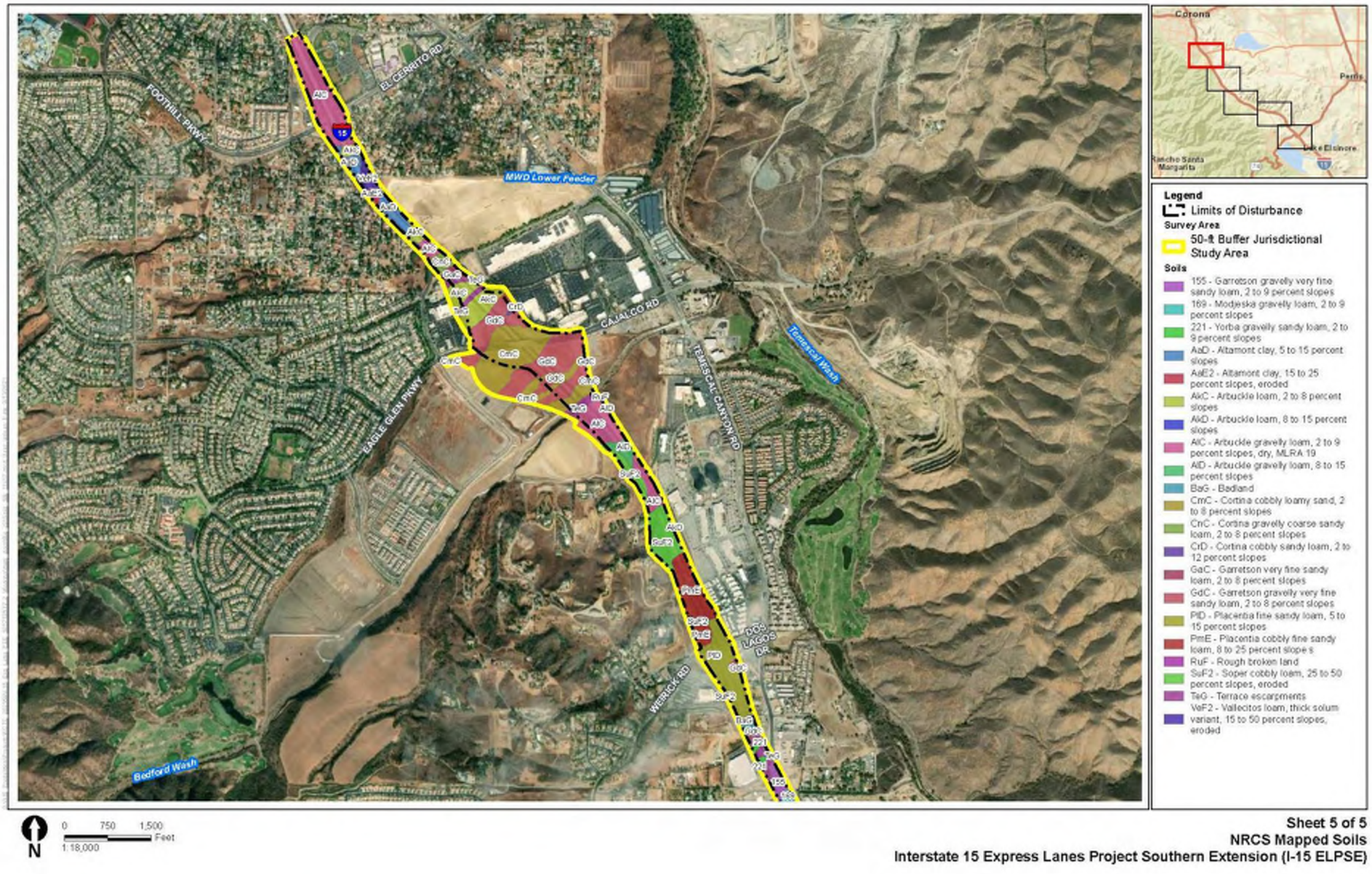

Figure 6-1.
Soils: Map 5

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6.1.4 Hydrology

The JSA occurs within the Bedford Wash-Temescal Wash [(Hydrologic Unit Code (HUC) 180702030604)], Dawson Canyon-Temescal Wash (HUC 180702030602), Arroyo del Toro-Temescal Wash (HUC 180702030601) and Lake Elsinore (HUC 180702020308) subwatersheds of the Santa Ana River Watershed (HUC 18070105) (USGS 2021). The Santa Ana River Watershed drains a 2,650 square mile area (Santa Ana RWQCB 1994). Drainages within the JSA receive flows from the Santa Ana Mountains, west of the JSA, and the Gavilan Hills east of the JSA. Temescal Wash, which connects Lake Elsinore in the south to the Santa Ana River north of the JSA, is the main drainage within the JSA, and most of the aquatic features within the JSA are eventually tributary to Temescal Wash. Within the JSA, Temescal Wash is an intermittent and perennial earthen drainage that supports riparian habitat throughout much of its length. Between the JSA and the Santa Ana River, Temescal Wash contains portions with earthen substrate that support areas with riparian habitat as well as portions that have been concrete-lined/channelized. All hydrological features within the JSA have been modified to some extent to support development of I-15 and surrounding residential, agricultural, and commercial land uses.

6.2 Field Assessment Results

A total of 146 features with an identifiable OHWM or discernible bed-and-bank, or both, were observed within the JSA. These features, and their potential USACE, RWQCB, and CDFW jurisdictional statuses are described below. The total extent of features potentially subject to USACE, RWQCB, and/or CDFW jurisdiction within the JSA is detailed in Appendix C. Maps showing the extent of potential jurisdictional areas overlaid on aerial photographs of the JSA are included in Appendix D and representative photographs of these features are provided in Appendix E. Features that did not exhibit an OHWM or discernible bed-and-bank were not mapped and are not listed in Appendix C or shown in Appendix D. Findings presented in this Jurisdictional Delineation Report are preliminary and subject to verification by USACE, RWQCB, and CDFW during final design.

6.2.1 U.S. Army Corps of Engineers Jurisdiction

A total of 145 features with an identifiable OHWM were observed within the JSA. Indicators used to delineate the OHWM within features in the JSA commonly included terracing, sediment deposition, destruction of terrestrial vegetation, changes in the character of the soil, an abrupt change in a plant community, flow patterns, a natural line impressed on the bank, the presence of litter and debris, and the presence of a wrack line. Three of these features were determined not to be subject to USACE jurisdiction per SWANCC as they were isolated from any downstream waters. 90 features within the JSA were determined to be potentially subject to USACE jurisdiction pursuant to Section 404 of the CWA based on the presence of an OHWM, location within a historical flowline or 100-year floodplain, and downstream connection to a traditional navigable water (Santa Ana River via Temescal Wash). Both wetland and nonwetland waters of the U.S. occur within the JSA. Total USACE jurisdiction within the JSA is detailed in Table A provided in Appendix C, and shown on figures provided in Appendix D. Findings presented in this Jurisdictional Delineation Report are preliminary and subject to verification by USACE.

Traditional Navigable Waters

Features within the JSA that exhibit a hydrologic connection to downstream waters are all eventually tributary to Temescal Wash, which is tributary to the Santa Ana River, approximately 8.5 river miles to

the northwest of the JSA. USACE has identified the Santa Ana River as a TNW in the portion from 19th Street Bridge in the City of Newport Beach to near its confluence with the Pacific Ocean in the City of Newport Beach, Orange County. Because of this significant nexus to a TNW, features within the JSA that are tributary to Temescal Wash are potentially subject to USACE jurisdiction pursuant to Section 404 of the CWA.

Constructed in Uplands

Fifty-two (52) features within the JSA exhibited an OHWM but are best characterized as ephemeral ditches constructed in upland areas, which are not generally regulated by USACE according to 2008 guidance issued by USACE (USACE 2008b). These are labeled as Constructed In Uplands on maps provided in Appendix D and are not considered subject to regulation by USACE under CWA Section 404. A total of 0.652 acre of features with an OHWM that were constructed in uplands were mapped within the JSA, as shown in Table 6-2.

Isolated Features

Three features within the JSA, two non-wetland (Features 27.9-1 and 28.2-1) and one wetland (Feature 30.8-1), exhibited an OHWM but were determined to be isolated from downstream features. Features were determined to be isolated if they are not traditionally navigable or interstate waters, nor tributaries thereof, nor adjacent to any of these. Isolation was determined by reviewing downstream areas in the field and reviewing aerial photographs. Isolated features are not subject to USACE following precedent set under SWANCC.

Feature 27.9-1

Feature 27.9-1 is a 0.17-acre earthen depressional area that exhibits evidence of ponding in the form of soil cracks and patches of algae in some areas. Mapped vegetation within this area is Goodding's Willow-Red Willow Riparian Woodland and Forest, with dominants including Goodding's willow (*Salix gooddingii*), tamarisk (*Tamarix* sp.), and arroyo willow (*Salix laevigata*) identified in the tree layer, mule fat (*Baccharis salicifolia*) and castor bean (*Ricinus communis*) in the shrub layer, and Spanish false fleabane (*Pulicara paludosa*) and stinging nettle (*Urtica dioica*) in the herbaceous layer. Wetland Determination Data Forms 27.9-1_01 and 27.9-1_02 were completed for the portions of the depression that exhibited the clearest signs of wetland hydrology. This feature does not support all three USACE wetland parameters (i.e. hydrophytic vegetation, hydric soil, and wetland hydrology) at either of the sampled locations. Hydrology within Feature 27.9-1 appears to be supported by runoff from nearby Temescal Canyon Road and does not connect to any downstream features. Therefore Feature 27.9-1 is isolated and not considered a water of the U.S. Wetland Determination Data Forms 27.9-1_01 and 27.9-1_02 are included in Appendix A. It is labeled as OHWM (Isolated) on maps provided in Appendix D and is not subject to USACE following precedent set under SWANCC.

Table 6-2. Acreage of Potential Waters of the U.S. by Project Section

Potential Jurisdictional Status	Map Label (Appendix D)	Total Acreage within JSA (acres)
USACE		
Non-jurisdictional	Constructed in Uplands	0.652
Non-jurisdictional	OHWM (Isolated)	0.171
Non-jurisdictional	Wetland (Isolated)	0.038
Total		***0.860***
Section 404 Non-Wetland	OHWM (Intermittent) OHWM (Perennial) OHWM (Ephemeral)	6.757
Section 404 Wetland	Wetland	3.234
Total		***9.991***
RWQCB		
Non-jurisdictional	Constructed in Uplands	0.652
Non-jurisdictional	OHWM (Isolated)	0.002
Total		***0.654***
Section 401 Non-Wetland	OHWM (Intermittent) OHWM (Perennial) OHWM (Ephemeral)	6.757
Section 401 Wetland	Wetland	3.234
Total		***10.008***
Porter-Cologne Wetland	Wetland (Isolated)	0.206
Porter-Cologne Riparian	Riparian (Isolated)	0.168
Total		***0.374***
CDFW		
Non-jurisdictional	Constructed in Uplands	2.275
Total		***2.275***
Section 1600 Streambed	Streambed	11.730
Section 1600 Riparian	Riparian	14.693
Total		***26.423***
Source: HDR, Inc 2021		

Feature 28.2-1

Feature 28.2-1 is an ephemeral, earthen channel conveying flows from a small valley west of the JSA into the shoulder of SB I-15. It supports Brittle Bush Scrub vegetation throughout the feature and is a non-wetland feature. Feature 28.2-1 terminated in the SB I-15 shoulder and does not connect to any downstream features. Feature 28.2-1 is labeled as OHWM (Isolated) on maps provided in Appendix D and is not subject to USACE jurisdiction pursuant to SWANCC.

Feature 30.8-1

Feature 30.8-1 is an earthen depressional area located on the SB side of I-15 near Mayhew Canyon Road. It occurs along a natural flowline that is apparent in topographic maps and historic aerial photographs. The area supports southern willow scrub vegetation around a defined channel that. It collects water from the west and exhibits a defined 6-foot wide channel that supports perennial flows with arroyo willow (*Salix laevigata*), cattails (*Typha* sp.), and tall cyperus (*Cyperus eragrostis*) in the accessible portion of the channel. Cattails were observed in the channel in inaccessible areas. It is mapped as Freshwater/Forested Shrub Wetland on NWI Mapping. A Wetland Determination Data Form was completed in the wet portion of the channel and the feature met all three USACE wetland parameters. Vegetation is confined to the wet portions of the channel; therefore, an upland paired point was not conducted due to the lack of hydrophytic vegetation in adjacent upland areas. Feature 30.8-1 is isolated, as it does not have an outlet or other connection to downstream waters. It is labeled as Wetland (Isolated) on maps provided in Appendix D and is not subject to USACE jurisdiction pursuant to SWANCC. Wetland Determination Data Form 30.8-1_01 is included in Appendix A.

Potential Non-Wetland Waters of the U.S.

Eighty-three (83) of the features identified as subject to USACE jurisdiction support areas of potentially jurisdictional non-wetland waters of the U.S. Table 6-2 shows the total acreage of potential waters of the U.S. within the JSA. Details of features within the JSA that support non-wetland waters of the U.S. are included in Appendix C. Features that support non-wetland waters of the U.S. are shown as OHWM (Ephemeral), OHWM (Intermittent) and OHWM (Perennial) on maps included in Appendix D. Photographs of these features are included in Appendix E.

Potential Wetland Waters of the U.S.

Features containing areas that exhibited hydrophytic vegetation, hydric soils, and wetland hydrology were mapped as potential wetland waters of the U.S. Characteristics regarding flow regime, location in regards to watershed or floodplain, or alignment with historical naturally-occurring features are included in Appendix C and photographs of these features are included in Appendix E.

Ten (10) of the features identified within the JSA contain wetlands as defined by USACE guidelines, including multiple sections of Temescal Wash (Features 24.3-2, 25.2-1, 25.8-1, and 28.1-1) as well as Features 26.4-1, 30.3-1, 31.5-2, 33.8-3, 35.7-1, and 37.2-1. Some of these areas were inaccessible and soil pits could not be conducted. In these cases, features were studied to the fullest extent possible in the field, on current and historical aerial photographs and on the National Wetlands Inventory Online Mapping tool. Soil maps were reviewed where needed to identify mapped hydric soils. In these inaccessible areas, wetlands were assumed for areas where vegetation and hydrology were present and soils were considered

likely to meet wetland parameters based on the presence of water in the drainages on aerial photographs taken at several different seasons in multiple years.

Temescal Wash

Temescal Wash generally flows from south to north, connecting Lake Elsinore in the south to the Santa Ana River in the north. It runs mostly parallel to the JSA, crossing under I-15 just north of the intersection of Hostettler Road and Temescal Canyon Road. Within the JSA, Temescal Wash has an earthen bottom and exhibits intermittent and perennial flows that support riparian habitat and wetlands in some areas. Temescal Wash was mapped in four separate locations within the JSA (Features 24.3-2, 25.2-1, 25.8-1, and 28.1-1), all of which supported wetland waters of the U.S. Vegetation communities mapped within Temescal Wash within the JSA include Fremont Cottonwood Forest and Woodland, Goodding's Willow-Red Willow Riparian Woodland and Forest, Hardstem and California Bullrush Marshes, and Quailbush scrub. Within the JSA, Temescal Wash has areas mapped as Freshwater Forested Shrub Wetland, Freshwater Emergent Wetland and Riverine on NWI mapping.

Seven Wetland Determination Data Forms were assessed within Temescal Wash. Some portions of Temescal Wash within the JSA were not accessible due to presence of standing water. Portions of the wash within inaccessible areas that supported monotypic stands of OBL vegetation, notably cattails (*Typha* sp.), were mapped as wetlands without Wetland Determination Data Forms completed. Wetland Determination Data Forms 24.3-2_01, 24.3-2_02, 28.1-1_01, 28.1-1_02, 28.1-1_03, 28.1-1_04 and 28.1-1_05 are included in Appendix A.

Feature 26.4-1

Feature 26.4-1 is an earthen basin located on the NB side of I-15, just south of Lake Street. Vegetation mapped for the basin includes Hardstem and California Bullrush Marshes and Goodding's Willow-Red Willow Riparian Woodland and Forest. The basin supports willows in the drier areas around the edges and at the northern edge of the basin, and dense cattail thickets in the southern end of the basin. It receives flows via a corrugated pipe inlet in the southwest corner of the basin. Based on USGS hydrography data, flows are conveyed from the basin into a culvert at the northwest edge and into Temescal Wash via an underground pipe. It is mapped as Freshwater Forested/Shrub Wetland on NWI mapping.

Two Wetland Determination Data Forms were completed within Feature 26.4-1: one in the drier northern end where soil cracks were present (26.4-1_01) and one in the wetter central portion where vegetation transitioned from willow scrub to cattail thickets (26.4-1_02). Both data points met all three USACE wetland parameters and the entire portion of the basin within the OHWM was mapped as wetland waters of the U.S. Wetland Determination Data Forms 26.4-1_01 and 26.4-1_02 are included in Appendix A.

Feature 30.3-1

Feature 30.3-1 is an earthen depressional area located on the NB side of I-15, just south of Indian Truck Trail. Vegetation within this area is mapped as Goodding's Willow-Red Willow Riparian Woodland and Forest. It receives flows from three culverts at the northwest corner, one of which had water in its flowline at the time of the surveys. Two Wetland Determination Data Forms were completed at this location, one within the OHWM and one just outside. The data form within the OHWM (30.3-1_01) met all three USACE wetland parameters and all areas within the OHWM for this feature were mapped as

wetland waters of the U.S. Wetland Determination Data Forms 30.3-1_01 and 30.3-1_02 are included in Appendix A.

Feature 31.5-2

Feature 31.5-2 is a constructed channel located in a mitigation area between SB I-15 and Campbell Ranch Road. It consists of a deep channel with earthen bottom and rock rip-rap sides. The channel supports willows (*Salix* sp) and cattails (*Typha* sp.). It receives flows from a culvert on its south end and conveys flows into a separate channel via a culvert at the north end. It is not shown as wetlands or riverine on NWI mapping.

Wetland Determination Data Form 31.5-2 was completed for this channel. Wetland hydrology and hydrophytic vegetation are present in this location. A soil pit was not conducted as permission to dig on the property was not granted, so soils were assumed to be hydric and the area was mapped as wetland. Soils mapped for the location on NRCS mapping were Ramona sandy loam, 0 to 5 percent slopes, severely eroded, which does not have any hydric components. However, since this channel is constructed, actual soils likely do not match the mapped soils. Wetland Determination Data Form 31.5-2 is included in Appendix A.

Feature 33.8-3

Feature 33.8-3 is a channelized feature with concrete bottom that collects flows via a storm drain outlet on its northwest edge. It is not shown as wetlands or riverine on NWI mapping. Much of the feature was inaccessible due to a fence at the ROW edge, however the feature was visible and supported 100 percent cover of cattails, which is listed as obligate wetland on USACE's *2018 Arid West Regional Wetland Plant List*. Therefore, the portions of this feature within the OWHM were mapped as wetland waters of the U.S. Wetland Determination Data Form 33.8-3_01 was completed for this location and is included in Appendix A.

Feature 35.7-1

Feature 35.7-1 is a channelized feature with rock rip-rap bottom, as observed within accessible portions of the JSA. It collects flows from an unnamed drainage to the west that is mapped as R4SBA (Riverine, Intermittent, Streambed) on National Wetland Inventory mapping. There is a culvert on the eastern edge that is blocked, resulting in ponding at the culvert and approximately 40 feet upstream. The channel supports standing water with dense cover of perennial pepperweed (*Lepidium latifolium*). It is mapped as Riverine on NWI mapping.

Wetland Determination Data Form 35.7-1_01 was completed for this feature, although a soil pit was not dug due to the rock rip-rap bottom. A paired data point was not conducted because the area has a clearly defined transition between the incised channel with rock rip-rap and upland banks. Much of the feature was inaccessible due to a fence at the ROW edge, however the portion of the feature within the JSA was visible and supported 100 percent cover of perennial pepperweed, which is listed as facultative wetland on USACE's *2018 Arid West Regional Wetland Plant List*. Therefore, the portions of this feature within the OWHM were mapped as wetland waters of the U.S. Wetland Determination Data Form 35.7-1_01 is included in Appendix A.

Feature 37.2-1

Feature 37.2-1 is a detention basin that collects upstream flows from an inlet on its southwest corner near Bedford Canyon Road. An outlet from the basin was not visible in the field due to dense vegetation growth, however it appears, based on aerial imagery, that flows that collect in the basin are conveyed under I-15 and into a rectangular concrete channel located on the east side of I-15. This channel is eventually tributary to Temescal Wash, approximately 0.75 mile downstream of the JSA. It is mapped a Riverine on NWI mapping.

The outer edges of the basin support a dense canopy mapped as Goodding's Willow-Red Willow Riparian Woodland and Forest. The bottom of the basin supported a stand of cattails. Wetland Determination Data Form 37.2-1_01 was completed in the area dominated by cattails, and all three USACE wetland parameters were met at this location. Wetland Determination Data Form 37.2-1_02 was conducted at the point where herbaceous vegetation transitioned into upland species dominated by castor bean (*Ricinis communis*) and red brome (*Bromus madritensis* ssp. *rubens*). This area did not support hydric soils; therefore, wetlands were mapped for this feature only within the lower portion dominated by cattails. Wetland Determination Data Forms 37.2-1_01 and 37.2-1_02 are provided in Appendix A and photos of Feature 37.2-1 are included in Appendix E of this JD report.

The total acreage of wetland areas potentially subject to USACE jurisdiction pursuant to Section 404 of the CWA is 3.234 acres, as shown in Table 6-2 . Details of features within the JSA that support wetland waters of the U.S. are included in Appendix C. Features that support wetland waters of the U.S. are shown as Wetland on maps in Appendix D. Photographs of these features are included in Appendix E. Wetland Determination Data Forms for these features are included in Appendix A.

6.2.2 Regional Water Quality Control Board Jurisdiction

Constructed in Uplands

Fifty-two (52) features within the JSA exhibited an OHWM but are best characterized as unvegetated ephemeral ditches constructed in upland areas to convey only roadside runoff. Since these features lack vegetation and exhibit minimal or no aquatic function, they support only limited (if any) functions and values for wildlife resources (i.e. wetland or riparian vegetation other aquatic resources). As a result, these features are not generally regulated by RWQCB. These are labeled as Constructed In Uplands on maps provided in Appendix D and are not considered subject to regulation by RWQCB under Section 401 of the CWA or Porter-Cologne. A total of 0.652 acre of features constructed in uplands were mapped within the JSA, as shown in Table 6-2.

Potential RWQCB-Regulated Non-Wetland Waters

All non-wetland features previously discussed as subject to USACE regulation pursuant to Section 404 of the CWA are also subject to RWQCB regulation pursuant to Section 401 of the CWA. These features are labeled as OHWM (Ephemeral), OHWM (Intermittent) and OHWM (Perennial) on maps in Appendix D. As shown in Table 6-2, a total of 6.757 acres of non-wetland areas potentially subject to RWQCB jurisdiction pursuant to CWA Section 401 were identified within the JSA.

Potential RWQCB-Regulated Wetlands and Riparian

RWQCB regulates areas that meet the USACE definition of wetlands pursuant to Section 401 of the CWA. The total acreage of wetland areas potentially subject to RWQCB jurisdiction pursuant to Section 401 of the CWA is 3.234 acres, as shown in Table 6-2.

In addition to Section 401 wetlands, pursuant to Porter-Cologne, RWQCB also regulates isolated wetlands and riparian habitat. As previously discussed, one isolated wetland area (Feature 30.8-1) and one isolated area with riparian habitat (Feature 27.9-1) were mapped within the JSA. As shown in Table 6-2, the total area of potential isolated wetlands and riparian habitat subject to potential RWQCB jurisdiction pursuant to Porter-Cologne is 0.206 acre.

6.2.3 California Department of Fish and Wildlife Jurisdiction

Features within the JSA were considered subject to CDFW jurisdiction if they exhibited a bed and bank, provided substantial habitat value for terrestrial and/or aquatic wildlife, and occurred within or were constructed within a naturally occurring drainage feature. Ditches that collected sheet flows only from adjacent roadways and were either isolated or connected directly to the underground storm drain system were not considered subject to CDFW jurisdiction. Details regarding CDFW jurisdiction for each feature identified within the JSA are provided in Appendix C and the limits of CDFW jurisdiction are included in Appendix E.

Constructed in Uplands

Fifty-two (52) features were considered to be not subject to CDFW jurisdiction because they were constructed in uplands, are not natural or modified natural drainages based on historical aerials and USGS topographic maps, and do not have adequate functions and values to benefit fish and wildlife resources (i.e. features are unvegetated, constructed in upland, concrete-lined, collect and convey only sheet flow or exhibit no evidence of surface flow, or discharge directly to an underground storm drain system,). These non-jurisdictional features are not included for further analysis, but are described in Appendix C and shown as Constructed in Uplands on maps included as Appendix D. As shown in Table 6-2, a total of 2.275 acres of streambed that were constructed in uplands were mapped within the JSA.

Potential Jurisdictional Streambeds

Seventy-five (75) features exhibiting streambeds that are either unvegetated or support upland vegetation that are potentially subject to CDFW jurisdiction under Section 1600 et seq. of the California Fish and Game Code were mapped within the JSA. These features are labeled as Streambed on maps in Appendix D. As shown in Table 6-2, potential CDFW-jurisdictional streambeds within the JSA totals 11.730 acres. Details of these features are provided in Appendix C and photographs are included in Appendix A.

Potential Jurisdictional Riparian Habitat

Typical riparian vegetation communities mapped within the JSA include Fremont Cottonwood Forest and Woodland, Goodding's Willow-Red Willow Riparian Woodland and Forest, Hardstem and California Bullrush Marshes, and Mulefat Thickets. Within the JSA, riparian communities were identified within Temescal Wash, and fourteen unnamed channels, basins, or depressional areas. In total, 19 features

supporting riparian habitat either within or extending beyond the mapped bed-and-bank that are potentially subject to CDFW jurisdiction under Section 1600 et seq. of the California Fish and Game Code were identified within the JSA. These features are labeled as Riparian on maps provided in Appendix D. While most riparian vegetation was confined to areas within the banks of the drainage, the canopy of trees and other plants typically supported by intermittent or perennial water extended beyond the banks in some instances. CDFW jurisdiction was mapped to the furthest extent of the riparian canopy.

As shown in Table 6-2, total of 14.693 acres of potential CDFW-jurisdictional riparian areas were mapped within the JSA. Details of features within the JSA that support CDFW riparian habitat are included in Appendix C and photographs are included in Appendix A.

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7 Conclusions

The JSA is located between two mountain ranges – the Santa Ana Mountains to the west and the Gavilan Hills to the east. As previously discussed, flows from these ranges are generally conveyed downstream towards Temescal Wash, which flows from south to north along much of the JSA. As a result, numerous drainage features occur within the JSA. The JSA is in a highly urbanized area and all of the drainage features within the JSA have been modified to some extent or were built exclusively for flood control purposes.

7.1 U.S. Army Corps of Engineers Jurisdiction

A total of 90 features potentially subject to USACE jurisdiction under Section 404 of the CWA were identified within the JSA. These features support both wetland and non-wetland potential waters of the U.S. A total of 6.757 acres of potential non-wetland waters of the U.S. and 3.234 acres of wetland waters of the U.S. subject to USACE jurisdiction under Section 404 of the CWA were identified within the JSA. These findings are preliminary and subject to verification by USACE.

7.2 Regional Water Quality Control Board Jurisdiction

All features identified as subject to USACE jurisdiction would also be subject to RWQCB jurisdiction. A total of 6.757 acres of potential non-wetland waters of the U.S. and 3.234 acres of wetland waters of the U.S. subject to RWQCB jurisdiction under Section 401 of the CWA were identified within the JSA.

A total of 0.206 acre of isolated wetlands and riparian habitat potentially subject to RWQCB jurisdiction according to Porter-Cologne were identified in the JSA. These findings are preliminary and subject to verification by RWQCB.

7.3 California Department of Fish and Wildlife Jurisdiction

A total of 91 features potentially subject to CDFW jurisdiction under Section 1600 et seq. of the California Fish and Game Code were identified within the JSA. These features support both riparian and non-riparian characteristics. A total of 11.730 acres of potential unvegetated streambed and 14.693 acres of riparian habitat potentially subject to CDFW jurisdiction were identified within the JSA. These findings are preliminary and subject to verification by CDFW.

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8 List of Preparers

Sarah Barrera, Senior Biologist – Fieldwork/Report Preparation

Jade Dean, GIS Analyst – GIS Lead/Graphics

Ingrid Eich, Environmental Sciences Section Manager – Biological Sciences – Fieldwork

Allegra Engleson, Associate Biologist – Fieldwork

Erin Martinelli, Senior Biologist – Report QA/QC

Aaron Newton, Assistant Biologist – Fieldwork

Rebecca Schartau, Biologist – Fieldwork/Report Preparation

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——— 1954. Photorevised1988. *Alberhill, California* 7.5-minute topographic quadrangle map
——— 1953. Photo revised 1988. *Lake Elsinore, California* 7.5-minute topographic quadrangle map.

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Appendix A. Vegetation Communities Maps

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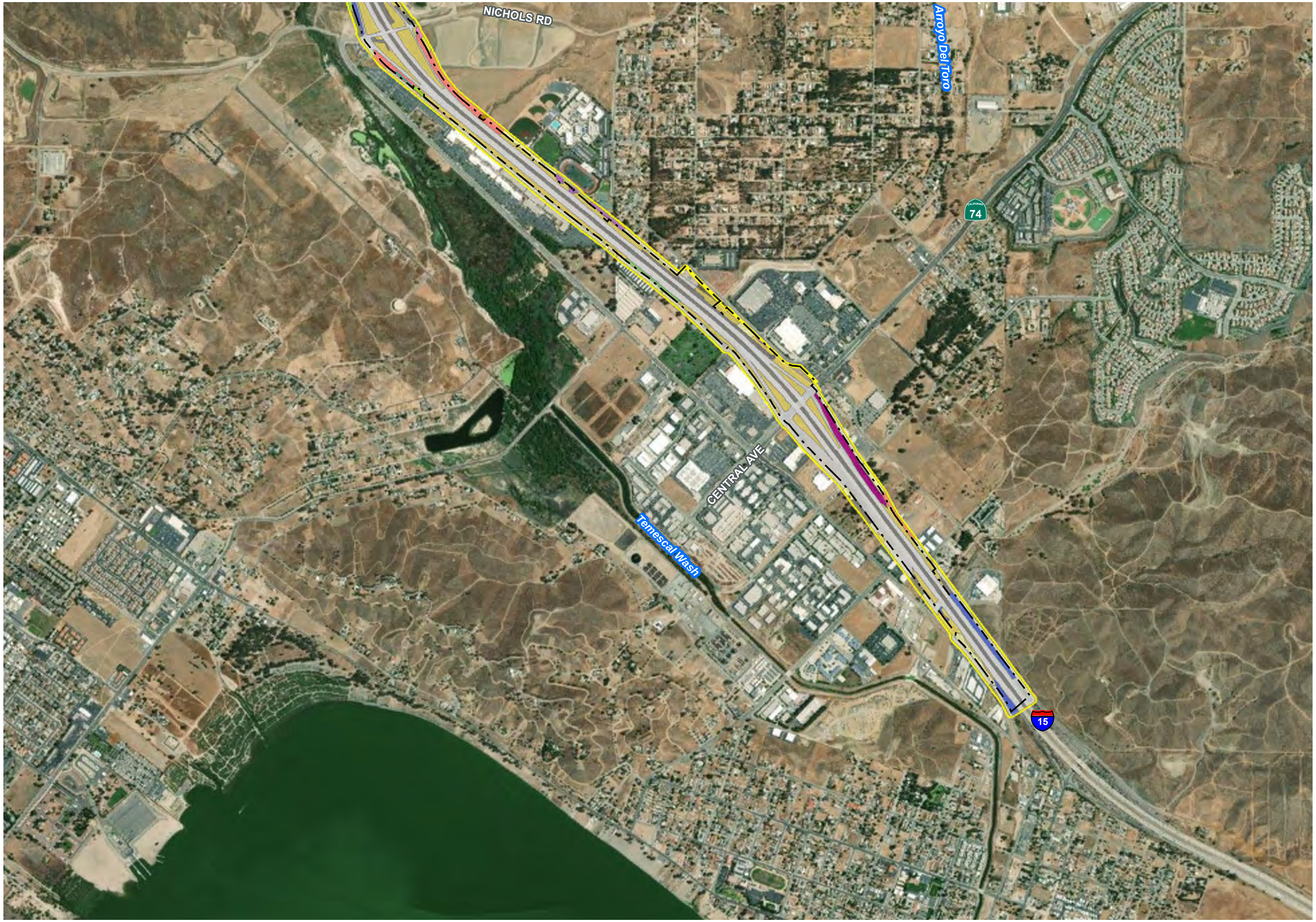

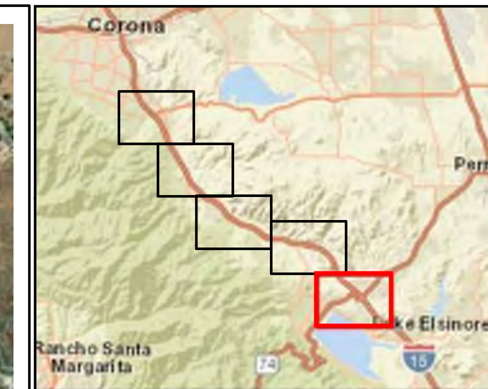

Legend

Limits of Disturbance

Survey Area

50-ft Buffer Jurisdictional Study Area

Vegetation Communities

- Brittle Bush Scrub (BBS)
- California Buckwheat Scrub (CBS)
- California Sagebrush - Black Sage Scrub (CS-BSS)
- Deer Weed Scrub (DWS)
- Developed (DEV)
- Disturbed (DIS)
- Eucalyptus - Tree of Heaven - Black Locust Groves (EUC/TH/BLG)
- Needle grass - Melic grass grassland (NG-MGG)
- Quailbush Scrub (QBS)
- Scale Broom Scrub (BSS)
- Tamarisk Thickets (TAM)
- Tarweed Fields (TAR-F)
- Upland Mustards or Star-Thistle Fields (UMSTF)
- Wild Oats and Annual Brome Grasslands (WO ABG)

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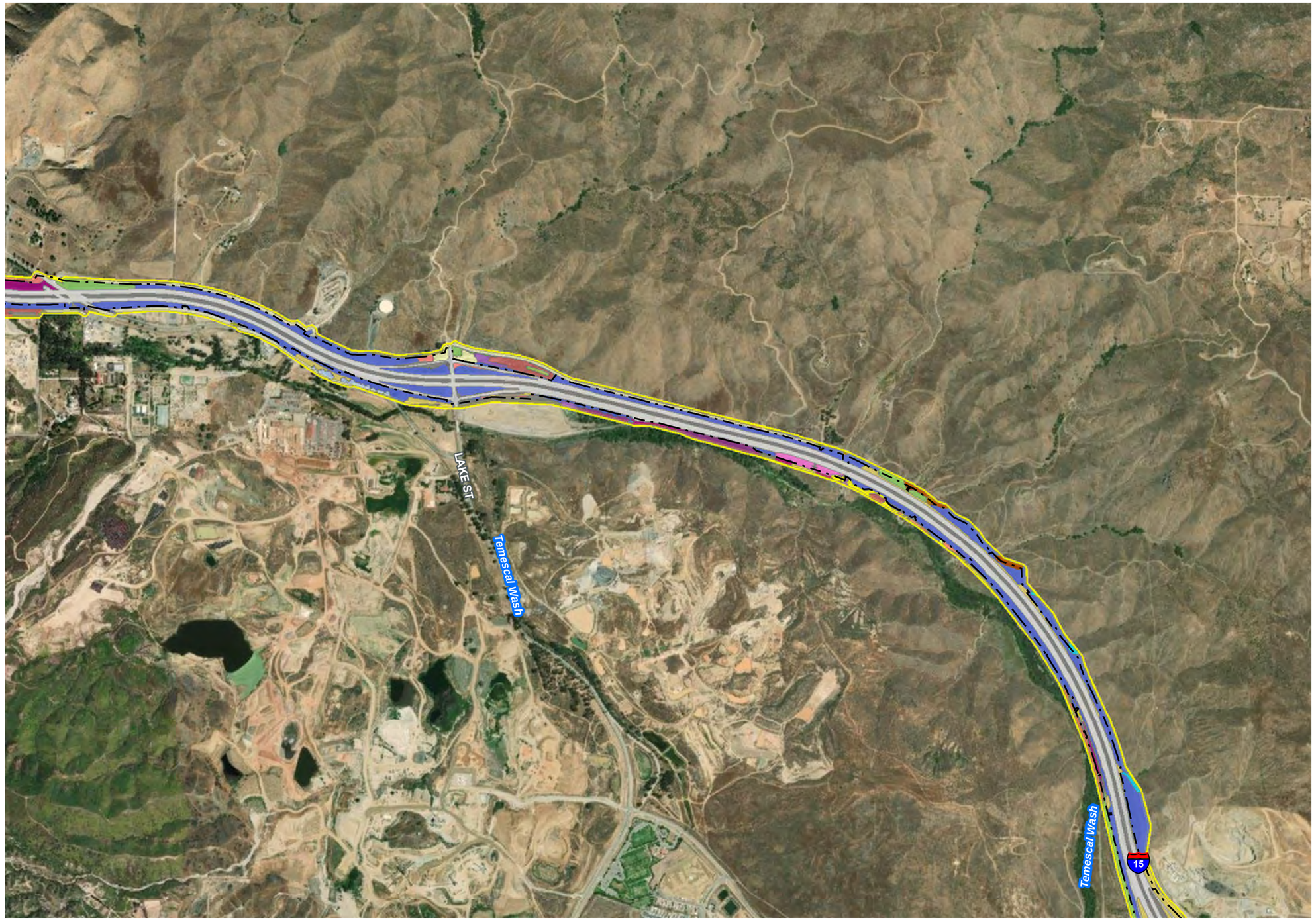
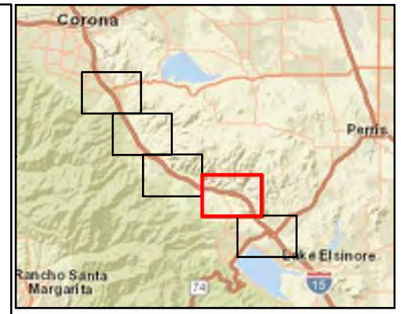
Sheet 1 of 5

Vegetation Communities

Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)





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Limits of Disturbance

Survey Area

50-ft Buffer Jurisdictional Study Area

Vegetation Communities

- Agricultural (AGR)
- Arrow Weed Thickets (AWT)
- Brittle Bush Scrub (BBS)
- Bush Penstemon Scrub (BPS)
- California Buckwheat Scrub (CBS)
- California Sagebrush - Black Sage Scrub (CS-BSS)
- Coast Live Oak Woodland and Forest (CLOWF)
- Deer Weed Scrub (DWS)
- Developed (DEV)
- Disturbed (DIS)
- Eucalyptus - Tree of Heaven - Black Locust Groves (EUC/TH/BLG)
- Fremont Cottonwood Forest and Woodland (FCFW)
- Gooding's Willow-Red Willow Riparian Woodland and Forest (GW-RWRWF)
- Hardstem and California Bullrush Marshes (HCBM)
- Holly Leaf Cherry - Toyon - Greenbark Ceanothus Chaparral (HLC/T/GCC)
- Mulefat Thickets (MFT)
- Salt Grass Flats (SGF)
- Scale Broom Scrub (BSS)
- Tamarisk Thickets (TAM)
- Upland Mustards or Star-Thistle Fields (UMSTF)
- Wild Oats and Annual Brome Grasslands (WO ABG)

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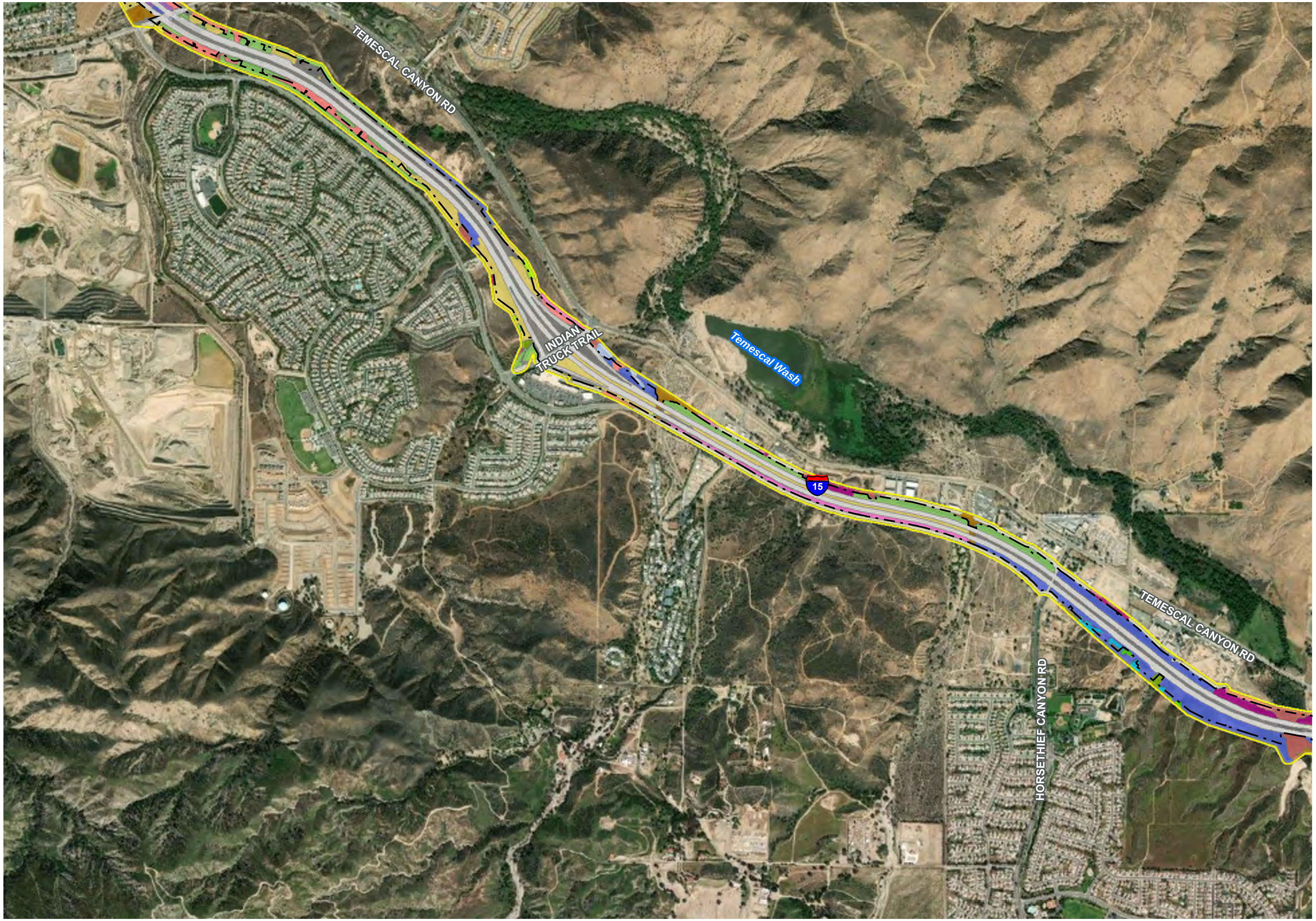
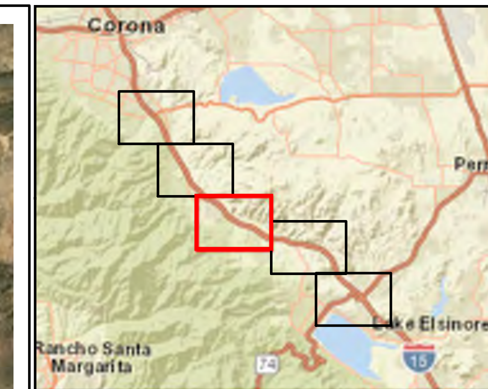
Sheet 2 of 5
Vegetation Communities
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)





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- Limits of Disturbance

Survey Area

- 50-ft Buffer Jurisdictional Study Area

Vegetation Communities

- Brittle Bush Scrub (BBS)
- Bush Penstemon Scrub (BPS)
- California Buckwheat Scrub (CBS)
- California Sagebrush - Black Sage Scrub (CS-BSS)
- California Sycamore Woodlands (CSW)
- Coast Live Oak Woodland and Forest (CLOWF)
- Deer Weed Scrub (DWS)
- Developed (DEV)
- Disturbed (DIS)
- Fremont Cottonwood Forest and Woodland (FCFW)
- Gooding's Willow-Red Willow Riparian Woodland and Forest (GW-RWRWF)
- Mulefat Thickets (MFT)
- Needle grass - Melic grass grassland (NG-MGG)
- Scale Broom Scrub (BSS)
- Scrub Oak Chaparral (SOC)
- Tamarisk Thickets (TAM)
- Upland Mustards or Star-Thistle Fields (UMSTF)
- Wild Oats and Annual Brome Grasslands (WO ABG)
- Wild Tarragon Patches (WTP)

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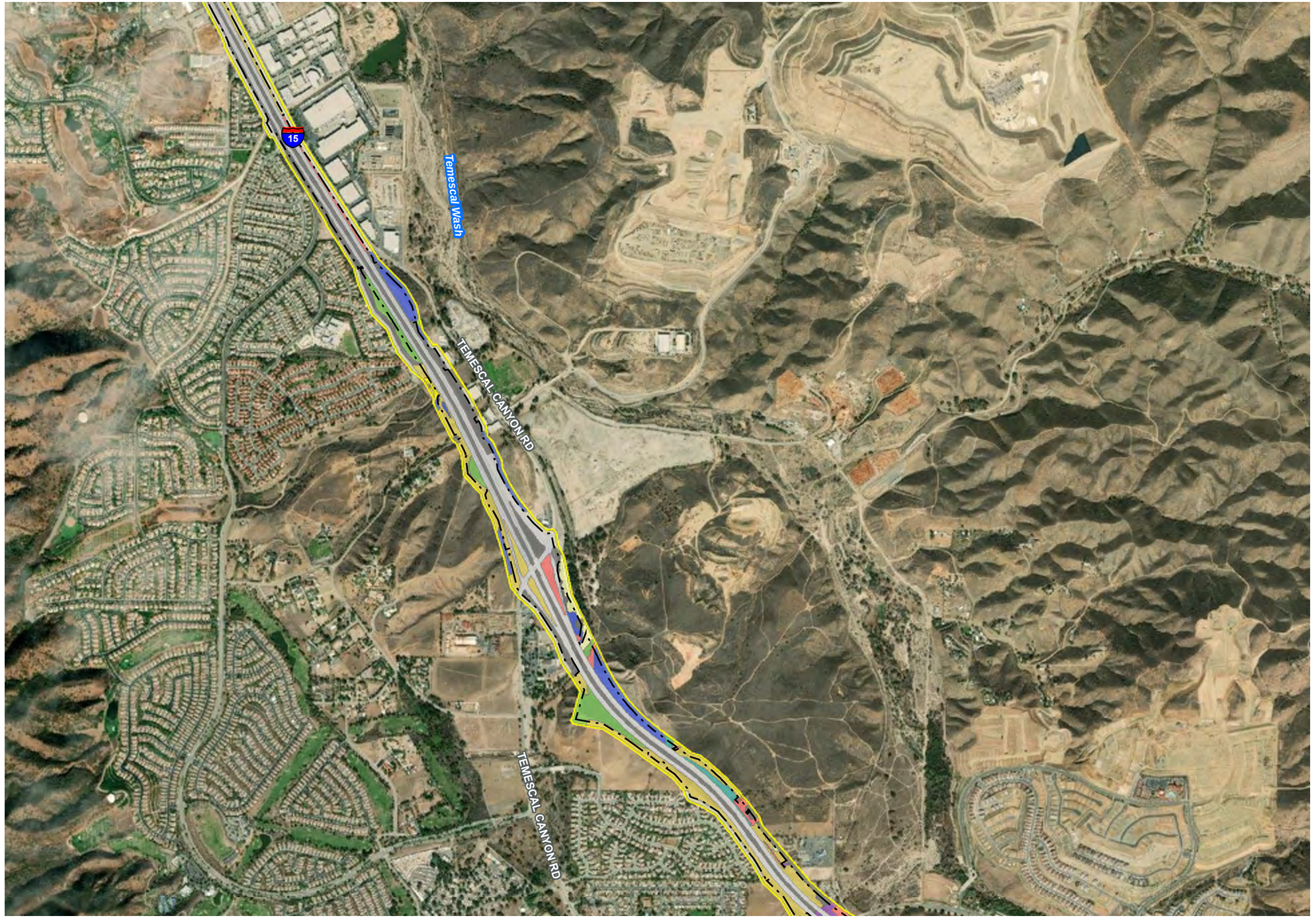
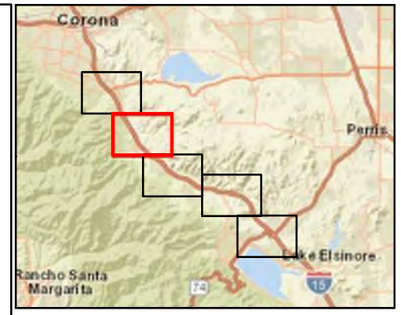
Sheet 3 of 5

Vegetation Communities

Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)





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- Limits of Disturbance

Survey Area

- 50-ft Buffer Jurisdictional Study Area

Vegetation Communities

- Brittle Bush Scrub (BBS)
- California Buckwheat Scrub (CBS)
- California Sagebrush - Black Sage Scrub (CS-BSS)
- Developed (DEV)
- Disturbed (DIS)
- Eucalyptus - Tree of Heaven - Black Locust Groves (EUC/TH/BLG)
- Gooding's Willow-Red Willow Riparian Woodland and Forest (GW-RWRWF)
- Mulefat Thickets (MFT)
- Scale Broom Scrub (BSS)
- Tamarisk Thickets (TAM)
- Tarweed Fields (TAR-F)
- Upland Mustards or Star-Thistle Fields (UMSTF)
- Wild Oats and Annual Brome Grasslands (WO ABG)

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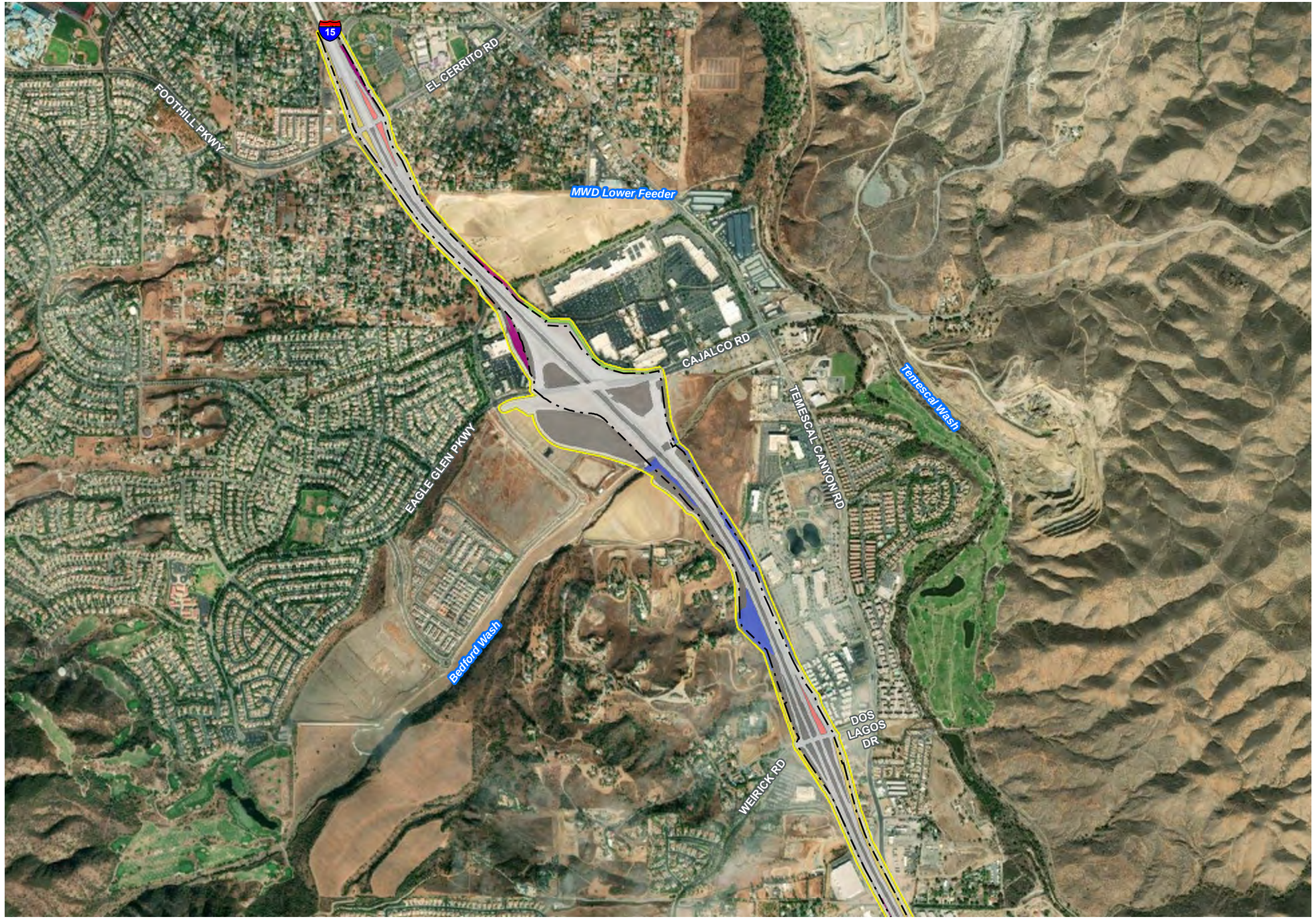
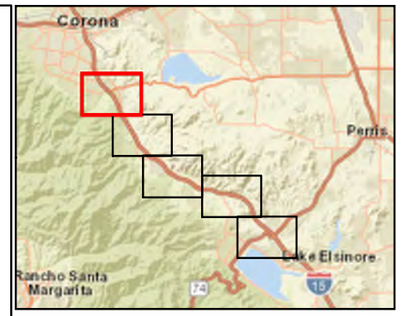
Sheet 4 of 5
Vegetation Communities
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)





Legend

- Limits of Disturbance

Survey Area

- 50-ft Buffer Jurisdictional Study Area

Vegetation Communities

- Brittle Bush Scrub (BBS)
- California Buckwheat Scrub (CBS)
- California Sagebrush - Black Sage Scrub (CS-BSS)
- Developed (DEV)
- Disturbed (DIS)
- Fremont Cottonwood Forest and Woodland (FCFW)
- Gooding's Willow-Red Willow Riparian Woodland and Forest (GW-RWRWF)
- Upland Mustards or Star-Thistle Fields (UMSTF)
- Wild Oats and Annual Brome Grasslands (WO ABG)

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Sheet 5 of 5
Vegetation Communities
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

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Appendix B. Wetland Determination Data Forms

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WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Riverside Sampling Date: 8/13/20

Applicant/Owner: State: CA Sampling Point: 24.3-2 01

Investigator(s): A. Engelson, S. Barrera, R. Schartau, A. Newto Section, Township, Range:

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

Subregion (LRR): C Lat: 33.716424 Long: -117.362746 Datum:

Soil Map Unit Name: Lodo Rocky Loam, 25 to 50 percent slopes, eroded NWI classification: PFO/EM1C

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:

No soil pit conducted due to standing water and OBL 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. Schoenoplectus sp.	80	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	80 = 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: 1 (B)

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	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:

Only plant in wet portion of channel is schoenoplectus.

SOIL

Sampling Point: 24.3-2 01

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:

Per 1987 manual, 100% dominance by OBL plants and standing water = wetland, no soil pit needed.

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): 4"

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:

Standing water in channel bottom.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Riverside Sampling Date: 8/13/20

Applicant/Owner: State: CA Sampling Point: 24.3-2 02

Investigator(s): A. Engleson, S. Barrera Section, Township, Range:

Landform (hillslope, terrace, etc.): Bank Local relief (concave, convex, none): Convex Slope (%): n/a

Subregion (LRR): C Lat: Long: Datum:

Soil Map Unit Name: Lodo Rocky Loam, 25 to 50 percent slopes, eroded NWI classification: PFO/EM1C

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:

Bank

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix gooddingii	60	Y	FACW
2.			
3.			
4.			
	60	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1. Baccharis salicifolia	30	Y	FACW
2.			
3.			
4.			
5.			
	30	= 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: 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 ✓ No _____

Remarks:

Willows and mulefat rooted in banks.

SOIL

Sampling Point: 24.3-2 02

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:

Unable to dig-very hard packed with 3-4" gravel. Appears to be fill with some reinforcement. Very dry.

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:

Steep bank on edge of wet creek channel. Hydrology quickly changes. Distinct change in vegetation between channel, banks, and upland. NNG on upland.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Corona/Riverside Sampling Date: 8/26/20

Applicant/Owner: Caltrans State: CA Sampling Point: 26.2-1 01

Investigator(s): A. Engelson, A. Newton Section, Township, Range:

Landform (hillslope, terrace, etc.): Basin outer boundary Local relief (concave, convex, none): None Slope (%): 0

Subregion (LRR): C Lat: 33.7290962 Long: -117.3877576 Datum:

Soil Map Unit Name: TwC NWI classification: PSSC

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

Are Vegetation _____, 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:

PSSC = Palustrine, scrub-shrub, seasonally flooded

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x15)	Absolute % Cover	Dominant Species?	Indicator Status
1. Tamarisk	25	Y	FAC
2. Salix gooddinggii	30	Y	FACW
3.			
4.			
	55	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____	= Total Cover	
Herb Stratum (Plot size: 5x5)			
1. Polypogon monspeliensis	30	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	30	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____	= Total Cover	

% Bare Ground in Herb Stratum 30 % Cover of Biotic Crust 0

Dominance Test worksheet:

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

✓ 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:

All polypogon monspeliensis is dead. However, survey conducted in dry season, which is to be expected of this annual. Hirchfeldia incana has moved in (20%) but not counted due to survey timing.

SOIL

Sampling Point: 26.2-1 01

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10 YR 2/2	100	-	-	-	-	Clay loam	No redox

[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: Compact soils

Depth (inches): 6

Hydric Soil Present? Yes ____ No ✓

Remarks:

Soils rocky, dry, and compact. Redox obs. in profile (0-6").

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:

Hydrologic indicators present

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Corona/Riverside Sampling Date: 8/26/20

Applicant/Owner: Caltrans State: CA Sampling Point: 26.2-1 02

Investigator(s): A. Engelson, A. Newton Section, Township, Range:

Landform (hillslope, terrace, etc.): Floodplain/edge of basin Local relief (concave, convex, none): None Slope (%): 0

Subregion (LRR): C Lat: 33.729169428 Long: -117.38807475 Datum:

Soil Map Unit Name: TbF2, TwC NWI classification: PSSC

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

Are Vegetation _____, 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:

Pit located at outer boundary of large basin. PSSC = Palustrine, shrub-scrub, consolidated bottom

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x15)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	25	Y	FACW
2. Salix gooddinggii	25	Y	FACW
3. Tamarisk	30	Y	FAC
4.			
	80	= 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 100 % Cover of Biotic Crust 0

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	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:

A few tamarisk within the plot have previously been cut but are sprouting from the stumps

SOIL

Sampling Point: 26.2-1 02

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10 YR 2/1	100	-	-	-	-	Clay loam	No redox
5-10	10 YR 4/4	100	-	-	-	-	Clay loam	Bottom layer very dry and unconsolidated/crumbly. no redox present

[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 redox present. Does not meet any criteria for hydric soils. Soils very compcat.

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:

Hydrologic indicators present

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Riverside Sampling Date: 8/27/20

Applicant/Owner: State: CA Sampling Point: 26.4-1 01

Investigator(s): I. Eich, S. Barrera, R. Schartau Section, Township, Range:

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

Subregion (LRR): Lat: 33.73088 Long: -117.39161 Datum:

Soil Map Unit Name: Tujunga Gravelly Loamy Sand, 0 to 8 percent slopes NWI classification: PFOA

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:

Basin collects water in southwest corner from culvert coming from under I-15. Outlets in northwest corner to drain connected to Temescal Wash. Point conducted in drier portion of basin with cracked soils, but less vegetation than where water enters. PFOA = Palustrine, forested, temporarily 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: 30')			
1. Salix gooddingii	20	Y	FACW
2.			
3.			
4.			
5.			
	20 = 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 100 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	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:

SOIL

Sampling Point: 26.4-1 01

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
1-16	10 YR 3/2	50	7.5 YR 5/6	50			Clay	Striated
0-1	10 YR 3/2	99	7.5 YR 5/6	1			Clay	

[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:

Consistent soils across basin.

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:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Riverside Sampling Date: 8/27/20

Applicant/Owner: State: CA Sampling Point: 26.4-1 02

Investigator(s): I. Eich, S. Barrera, R. Schartau Section, Township, Range:

Landform (hillslope, terrace, etc.): Basin Local relief (concave, convex, none): convex Slope (%): <1

Subregion (LRR): C Lat: 33.730661 Long: -117.390012 Datum:

Soil Map Unit Name: Tujunga gravelly loamy sand, 0 to 8 percent slopes NWI classification: PFOA

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:

Pit conducted in wetter portion of basin, with cattails and willow overstory. Basin has clear boundary of vegetation and topography defined by large boulder rip-rap banks, therefore no paired pit neededt pit.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix goodingii	40	Y	FACW
2.			
3.			
4.			
	40	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30x30)			
1. Salix goodingii	45	Y	FACW
2.			
3.			
4.			
5.			
	45	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Typha sp.	40	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	40	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____	= Total Cover	

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust 100

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:

✓ 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:

Pit located at northern edge of cattail thickets - areas to south consist of thick cattail cover

SOIL

Sampling Point: 26.4-1 02

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
0-14	10 YR 3/2	9	7.5 YR 5/8	10	C	PL,M	Clay loam	

[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:

Algal crust. Hydrogen sulfide smelled throughout basin.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Corona/Riverside Sampling Date: 8/26/20

Applicant/Owner: Caltrans State: CA Sampling Point: 27.2-1 01

Investigator(s): A. Engelson, A. Newton Section, Township, Range:

Landform (hillslope, terrace, etc.): Basin Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR): C Lat: 33.73227397 Long: -117.40430724 Datum:

Soil Map Unit Name: HnC NWI classification: None

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

Are Vegetation _____, 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:

Pit located in basin which drains through partially clogged culvert under Temescal Rd. Basin located between frontage road and hwy berm.

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: 5x5)			
1. Distichlis spicata	100	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	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:

Hydrophytic vegetation dominant

SOIL

Sampling Point: 27.2-1 01

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
0-8	10 YR 3/2	99	2.5 YR 4/8	1	C	M	Silty clay	

[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: Compact soils

Depth (inches): >8"

Hydric Soil Present? Yes ____ No ✓

Remarks:

Soils very compact. Does not meet the criteria for hydric soils. Not enough redox for F6.

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:

Hydrologic indicators present

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Riverside Sampling Date: 8/11/20

Applicant/Owner: State: CA Sampling Point: 27.9-1 01

Investigator(s): A. Engelson, A. Newton, S. Barrera, R. Schartz Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Convex Slope (%): n/a

Subregion (LRR): C Lat: 33.734016 Long: -117.414485 Datum:

Soil Map Unit Name: Gorgonio loamy sand, 0 to 8 percent slopes NWI classification: PSSA

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:

Isolated area mapped on NWI as wetlands. Very slight depressional area. Supports soil cracks,

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: 5x5)			
1. Ricinus communis	5	Y	FACU
2.			
3.			
4.			
5.			
	5 = Total Cover		
Herb Stratum (Plot size: 5x5)			
1. Pulicaria paludosa	90	Y	FAC
2. Urtica dioica	5	N	FAC
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 0

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	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:

SOIL

Sampling Point: 27.9-1 01

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-11	10YR 5/4	99	5YR 5/8	1	C	PL	Silty clay	silty clay loam

[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:

Slight depressional area with surface soil cracks in some of the lower areas. Biotic crust present in same areas as well.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Corona/Riverside Sampling Date: 8/11/20

Applicant/Owner: Caltrans State: CA Sampling Point: 27.9-1 (AEAN

Investigator(s): A. Engelson, S. Barrera, R. Schartau, A. Newto Section, Township, Range:

Landform (hillslope, terrace, etc.): Flat ponded area (dry) Local relief (concave, convex, none): None Slope (%): 0

Subregion (LRR): C Lat: 33.734013115 Long: -117.41448099 Datum:

Soil Map Unit Name: GhC NWI classification: Freshwater forested/sh

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:

Pit located in flat (dry) ponded area

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: 5x5)			
1. Juncus mexicanus	25	Y	FACW
2. Heliotropium curassavicum	20	Y	FACU
3. Polypogon monspeliensis (dead)	15	Y	FACW
4.			
5.			
6.			
7.			
8.			
	60 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 40 % Cover of Biotic Crust 0

Dominance Test worksheet:

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

SOIL

Sampling Point: 27.9-1 (AE

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-13	2.5 Y 3/3	100	-	-	-	-	Sandy loa	No redox

[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:

Alkaline soils (salt crust, salt tolerant plants), however, soil chroma too high to consider possible hydric with problematic alkaline soils

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:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Corona/Riverside Sampling Date: 8/11/20

Applicant/Owner: Caltrans State: CA Sampling Point: 27.9-1 02

Investigator(s): A. Engelson, S. Barrera, R. Schartau, A. Newto Section, Township, Range:

Landform (hillslope, terrace, etc.): Flat ponded area (dry) Local relief (concave, convex, none): None Slope (%): 0

Subregion (LRR): C Lat: 33.734013115 Long: -117.41448099 Datum:

Soil Map Unit Name: GhC NWI classification: Freshwater forested/sh

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:

Pit located in flat (dry) ponded area

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: 5x5)			
1. Juncus mexicanus	25	Y	FACW
2. Heliotropium curassavicum	20	Y	FACU
3. Polypogon monspeliensis (dead)	15	Y	FACW
4.			
5.			
6.			
7.			
8.			
	60 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 40 % Cover of Biotic Crust 0

Dominance Test worksheet:

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

SOIL

Sampling Point: 27.9-1 02

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-13	2.5 Y 3/3	100	-	-	-	-	Sandy loam	No redox

[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:

Alkaline soils (salt crust, salt tolerant plants), however, soil chroma too high to consider possible hydric with problematic alkaline soils

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:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Corona/Riverside Sampling Date: 8/11/20

Applicant/Owner: Caltrans State: CA Sampling Point: 28.1-1 01

Investigator(s): A. Engleson, A. Newton Section, Township, Range:

Landform (hillslope, terrace, etc.): Main stream channel Local relief (concave, convex, none): None Slope (%): 0

Subregion (LRR): C Lat: 33.7337693 Long: -117.4167109 Datum:

Soil Map Unit Name: GhC NWI classification: PFOC

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:

Patch of hydrophytic veg within main channel. PFOC = Palustrine, forested, 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: 15x15)			
1. Salix lasiolepis	40	Y	FACW
2. Salix lucita ssp. lasiandra (cf)	15	Y	FACW
3. Populus fremontii	15	Y	FAC
4.			
5.			
	70 = Total Cover		
Herb Stratum (Plot size: 5x5)			
1. Schoenoplectus acutus	30	Y	OBL
2. Pulicaria paludosa	15	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
	45 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 50 % Cover of Biotic Crust 5

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 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 ✓ No _____

Remarks:

Dominance of hydrophytic vegetation

SOIL

Sampling Point: 28.1-1 01

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:

Muck layer and hydrogen sulfide odor detected

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): 0

Water Table Present? Yes ✓ No _____ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 0

Wetland Hydrology Present? Yes ✓ **No** _____

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

Remarks:

Hydrologic criteria met

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Corona/Riverside Sampling Date: 8/11/20

Applicant/Owner: Caltrans State: CA Sampling Point: 28.1-1 02

Investigator(s): A. Engleson, S. Barrera, R. Schartau, A. Newto Section, Township, Range:

Landform (hillslope, terrace, etc.): Streambank Local relief (concave, convex, none): Convex Slope (%): 5

Subregion (LRR): C Lat: 33.7326892 Long: -117.414177905 Datum:

Soil Map Unit Name: GhC NWI classification: PFOC

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:

Bank height 2', flattens out in uplands. Pit located at edge of streambank.

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: 5x5)			
1. Pulicaria paludosa	100	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	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:

SOIL

Sampling Point: 28.1-1 02

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: 2-4" cobble

Depth (inches): 2"

Hydric Soil Present? Yes _____ No ✓

Remarks:

Soils compact with restrictive cobble layer at 2"

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:

Does not have 2 secondary indicators

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Corona/Riverside Sampling Date: 8/11/20

Applicant/Owner: Caltrans State: CA Sampling Point: 28.1-1

Investigator(s): A. Engleson, S. Barrera, R. Schartau, A. Newto Section, Township, Range:

Landform (hillslope, terrace, etc.): Streambank Local relief (concave, convex, none): Convex Slope (%): 5

Subregion (LRR): C Lat: 33.7326892 Long: -117.414177905 Datum:

Soil Map Unit Name: GhC NWI classification: PFOC

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:

Bank height 2', flattens out in uplands. Pit located at edge of streambank.

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: 5x5)			
1. Pulicaria paludosa	100	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	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:

SOIL

Sampling Point: 28.1-1

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: 2-4" cobble

Depth (inches): 2"

Hydric Soil Present? Yes _____ No ✓

Remarks:

Soils compact with restrictive cobble layer at 2"

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:

Does not have 2 secondary indicators

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Corona/Riverside Sampling Date: 8/11/20

Applicant/Owner: Caltrans State: CA Sampling Point: 28.1-03

Investigator(s): A. Engleson, A. Newton Section, Township, Range:

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

Subregion (LRR): C Lat: 33.7327169 Long: -117.4141793 Datum:

Soil Map Unit Name: GhC NWI classification: PFOC

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:

Oxidized rhizospheres. Pit located in depression/channel at base of freeeway and on toe of slope

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x10)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix goodinggii	60	Y	FACW
2.			
3.			
4.			
	60	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15x10)			
1. Salix gooddinggii	60	Y	FACW
2.			
3.			
4.			
5.			
	60	= Total Cover	
Herb Stratum (Plot size: 5x5)			
1. Pulicaria paludosa	2	Y	FAC
2. Schoenoplectus acutus	25	Y	OBL
3.			
4.			
5.			
6.			
7.			
8.			
	27	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 70 % Cover of Biotic Crust 0

Dominance Test worksheet:

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

✓ 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:

SOIL

Sampling Point: 28.1-03

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
0-4	2.5Y 3/2	93	2.5 YR 3/6	7			Silty clay	
4-10	2.5Y 3/2	80	2.5 YR 3/6	20	C	PL,M	Silty clay	Redox is prominent
10-14	2.5 Y 2.5/1	70	Gley 2 2.5/1	38			Silty clay	Muck/forming organic matter
			2.5 YR 4/4	2				

[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:

Soils meet for F6

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:

Soils damp but not saturated

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Corona/Rierside Sampling Date: 8/11/20

Applicant/Owner: Caltrans State: CA Sampling Point: 28.1-1 04

Investigator(s): A. Engleson, S. Barrera, R. Schartau, A. Newto Section, Township, Range:

Landform (hillslope, terrace, etc.): Outer floodplain bank Local relief (concave, convex, none): Convex Slope (%): 2

Subregion (LRR): C Lat: 33.732679 Long: -117.4155480 Datum:

Soil Map Unit Name: GhC NWI classification: PFOC

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: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix gooddingii	100	Y	FACW
2.			
3.			
4.			
	100 = 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 100 % Cover of Biotic Crust 0

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	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:

Location supports a dominance of hydrophytic vegetation.

SOIL

Sampling Point: 28.1-1 04

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: Cobble/rock

Depth (inches): 3"

Hydric Soil Present? Yes _____ No ✓

Remarks:

No redox or other hydric soil criteria observed

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:

Dense leaf litter in understory. No hydrologic indicators present.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Corona/Riverside Sampling Date: 8/11/20

Applicant/Owner: Caltrans State: CA Sampling Point: 28.1-1 05

Investigator(s): A. Engleson, S. Barrera, R. Schartau, A. Newto Section, Township, Range:

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

Subregion (LRR): C Lat: 33.732658755 Long: -117.415595 Datum:

Soil Map Unit Name: GhC NWI classification: PFOC

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:

Terrace adjacent to active channel but within outer floodplain bank.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix gooddingii	70	Y	FACW
2.			
3.			
4.			
	70 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5x5)			
1. Pulicaria palvdosa	50	Y	FAC
2. Schoenoplectus acutus	10	N	OBL
3.			
4.			
5.			
6.			
7.			
8.			
	60 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 40 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 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 ✓ No _____

Remarks:

SOIL

Sampling Point: 28.1-1 05

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
0-111	2.5 Y 3/2	86	5 YR 5/8	10	C	M, PL	Clay loam	4% organic matter in top layer
11-14	Gley 1 10 Y 2.5/1							
								Redox is prominent

[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:

Soils meet for F6

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:

Hydrologic indicators present

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Corona/Riverside Sampling Date: 8/26/20

Applicant/Owner: Caltrans State: CA Sampling Point: 28.6-1 01

Investigator(s): A. Engelson, A. Newton Section, Township, Range:

Landform (hillslope, terrace, etc.): Swale at culvert inlet Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR): C Lat: 33.737630 Long: -117.426840 Datum:

Soil Map Unit Name: GhC, TeG NWI classification: Riverine

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:

Pit located in swale at culvert inlet. Vegetation did not meet, therefore no soil profile needed.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x20)	Absolute % Cover	Dominant Species?	Indicator Status
1. Sambucus nigra	40	Y	FACU
2. Salix gooddinggii	30	Y	FACW
3.			
4.			
	70	= 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 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	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:

Dense leaf litter on ground

SOIL

Sampling Point: 28.6-1 01

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:

Site does not support a dominance of hydrophytic vegetation or hydrologic indicators, therefore a soil profile was not needed

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:

Faint bed and bank right at culvert inlet, no other indicators

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Corona/Riverside Sampling Date: 8/25/20

Applicant/Owner: Caltrans State: CA Sampling Point: 29.6-1 01

Investigator(s): A. Engelson, A. Newton Section, Township, Range:

Landform (hillslope, terrace, etc.): Channel bottom at culvert inl Local relief (concave, convex, none): None Slope (%): 1

Subregion (LRR): C Lat: 33.74358844 Long: -117.4405262 Datum:

Soil Map Unit Name: TeG NWI classification: PUSCh

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:

Problematic sandy soils. Review historic aerials to confirm drainage. PUSCh = Palustrine, unconsolidated shore, seasonally flooded, diked/impounded

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: 15x10)			
1. Populus fremontii	75	Y	FACW
2.			
3.			
4.			
5.			
	75 = Total Cover		
Herb Stratum (Plot size: 5x5)			
1. Mimulus guttatus	10	Y	OBL
2. Mimulus cardinalis	5	Y	FACW
3.			
4.			
5.			
6.			
7.			
8.			
	15 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust 0

Dominance Test worksheet:

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

✓ 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:

SOIL

Sampling Point: 29.6-1 01

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	2.5Y 4/2	10	-	-	-	-	Loamy sand	Coarse sand, no true matrix color as 90% of matrix are coarse sand multi colored

[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:

Given flows are present in the middle of the dry season and no precip events have occurred recently. Assuming hydric soils. Likely that coars sand substrate drains too quickly to develop redox.

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): 0

Water Table Present? Yes ___ No ✓ Depth (inches): >18

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:

Hydrologic indicators present

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Corona/Riverside Sampling Date: 8/25/20

Applicant/Owner: Caltrans State: CA Sampling Point: 29.6-1 02

Investigator(s): A. Engelson, A. Newton Section, Township, Range:

Landform (hillslope, terrace, etc.): Floodplain terrace Local relief (concave, convex, none): Convex Slope (%): 3

Subregion (LRR): C Lat: 33.7435977 Long: -117.440349523 Datum:

Soil Map Unit Name: TeG NWI classification: PUSCh

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:

No surface water

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: 15x10)			
1. Populus fremontii	10	Y	FACW
2. Baccharis salicifolia	2	Y	FAC
3.			
4.			
5.			
	12 = 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 100 % Cover of Biotic Crust 0

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	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:

SOIL

Sampling Point: 29.6-1 02

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	2.5 Y 5/3	10	-	-	-	-	Loamy sa	Coarse multi-colored snad. No true "matrix color"

[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:

Pit is located outside of active channel. No surface water at site.

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): 9

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: I-15 ELPSE City/County: Corona/Riverside Sampling Date: 8/25/20

Applicant/Owner: Caltrans State: CA Sampling Point: 30.2-1 01

Investigator(s): A. Engleson, A. Newton Section, Township, Range:

Landform (hillslope, terrace, etc.): Stream channel, dry Local relief (concave, convex, none): None Slope (%): 2

Subregion (LRR): C Lat: 33.74760129 Long: -117.44901559 Datum:

Soil Map Unit Name: TeG NWI classification: Riverine

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: 30x20)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix laevigata (cf)	70	Y	FACW
2.			
3.			
4.			
	70	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15x15)			
1. Baccharis salicifolia	50	Y	FAC
2.			
3.			
4.			
5.			
	50	= 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 100 % Cover of Biotic Crust 0

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	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:

ART CAL, HIR INC on banks

SOIL

Sampling Point: 30.2-1 01

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10 YR 4/2	100	-	-	-	-	Clay	No redox
10-12	10 YR 4/2	10	-	-	-	-	Loamy sa	Coarse sand predominant with 10% fines as binder

[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 redox present. Does not meet criteria for hydric soils

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:

Hydrologic indicators present

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Corona/Riverside Sampling Date: 8/25/20

Applicant/Owner: Caltrans State: CA Sampling Point: 30.2-1 02

Investigator(s): A. Engelson, A. Newton Section, Township, Range:

Landform (hillslope, terrace, etc.): Culvert outlet, floodplain terr Local relief (concave, convex, none): Convex Slope (%): 1

Subregion (LRR): C Lat: 33.7475376 Long: -117.4491517 Datum:

Soil Map Unit Name: TeG NWI classification: Riverine

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:

Ponded water at culvert outlet with algae. FAC plants on sandy terrace adjacent to ponded area.

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: 5x15)			
1. Pulicaria paludosa	40	Y	FAC
2.			
3.			
4.			
5.			
	40 = Total Cover		
Herb Stratum (Plot size: 5x5)			
1. Urtica dioica	10	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	10 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 60 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 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 ✓ No _____

Remarks:

Hydrophytic vegetation dominant

SOIL

Sampling Point: 30.2-1 02

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-9	10 YR 3/3	50	-	-	-	-	Sandy cla	50% coarse multicolored sand
9-13	5 Y 2.5/1	60	2.9 Y 4/4	1	C	PL	Clay/muc	
	10 YR 3/4	39	-	-	-	-		
13-16	2.5 Y 3/2	100	-	-	-	-	Sandy cla	

[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:

Redox occurs only along root channels at 1% of matrix. Not enough redox to meet for F6

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:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Corona/Riverside Sampling Date: 8/25/20

Applicant/Owner: Caltrans State: CA Sampling Point: 30.2-1 03

Investigator(s): A. Engelson, A. Newton Section, Township, Range:

Landform (hillslope, terrace, etc.): Dry channel Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR): C Lat: 33.7475548 Long: -117.44911899 Datum:

Soil Map Unit Name: TeG NWI classification: Riverine

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:

Pit located downstream of open water (culvert outlet). Signs of ponding

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: 5x5)			
1. Urtica dioica	50	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	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: 1 (B)

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	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:

Hydrophytic vegetation dominant

SOIL

Sampling Point: 30.2-1 03

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10 YR 4/3	50	-	-	-	-	Silty clay	No redox
	10 YR 2/1	50	-	-	-	-		
10-16	10 YR 3/1	100	-	-	-	-	Clay loam	No redox

[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:

Soils do not meet criteria for hydric soils

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:

Hydrologic indicators present

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Corona/Riverside Sampling Date: 8/25/20

Applicant/Owner: Caltrans State: CA Sampling Point: 30.3-1 01

Investigator(s): A. Engelson, A. Newton Section, Township, Range:

Landform (hillslope, terrace, etc.): Floodplain at culvert outlet Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR): C Lat: 33.749055 Long: -17.4510836 Datum:

Soil Map Unit Name: CnC NWI classification: Riverine

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: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus fremontii	70	Y	FACW
2. Salix lasiolepis (cf, hybrid?)	30	Y	FACW
3. Tamarisk	5	N	FAC
4.			
	135 = 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 100 % Cover of Biotic Crust 0

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	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:

Medium dense leaf filter in understory

SOIL

Sampling Point: 30.3-1 01

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	2.5 Y 4/2	100	-	-	-	-	Sandy loa	

[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:

Soils very dry. No redox. Hydric soils not present.

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:

Sorted sediment and shallow braided swales

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Corona/Riverside Sampling Date: 8/25/20

Applicant/Owner: Caltrans State: CA Sampling Point: 30.3-1 2

Investigator(s): A. Engelson, A. Newton Section, Township, Range:

Landform (hillslope, terrace, etc.): Floodplain, edge of wet chan Local relief (concave, convex, none): None Slope (%): 0

Subregion (LRR): C Lat: 33.749010056 Long: -117.450982 Datum:

Soil Map Unit Name: CnC NWI classification: Riverine

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:

Channel originates from another culvert (cmp 48")

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x15)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix gooddinggii	75	Y	FACW
2. Tamarisk	20	Y	FAC
3.			
4.			
	95 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15x15)			
1. Ricinus communis	50	Y	FACU
2.			
3.			
4.			
5.			
	50 = 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 40 % Cover of Biotic Crust 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 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:

Tree stratum only includes trees rooted within adjacent running stream

SOIL

Sampling Point: 30.3-1 2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	-	-	-	-	-	-	Silty clay	Abundant root material in top la
4-9	5 Y 4/1	28	5 YR 3/4	2	C	PL	Silty clay	Redox along living root channels
Muck	5Y 2.5/1	70	-	-	-	-		
9-14	-	-	-	-	-	-	Loamy Sa	Very coarse sand, no matrix color

[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:

Soils meet for all

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:

Soils very moist. Pit conducted about 6" from running water in channel

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE - Feature 30.8-1 City/County: Riverside Sampling Date: 8/26/20

Applicant/Owner: State: CA Sampling Point: 30.8-1 01

Investigator(s): S. Barrera, R. Schartau Section, Township, Range:

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

Subregion (LRR): C Lat: 33.7536 Long: -117.4577 Datum:

Soil Map Unit Name: Altamont Clay, 15 to 25 percent slopes, eroded NWI classification: PSSCh

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:

Water flowing into culvert in a valley between hills. Surface water present.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix laevigata	30	Y	FACW
2.			
3.			
4.			
	30 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Salix laevigata	60	Y	FACW
2.			
3.			
4.			
5.			
	60 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Cyperus eragrostis	4	N	FACW
2. Typha sp.	20	Y	OBL
3.			
4.			
5.			
6.			
7.			
8.			
	24 = 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:

✓ 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:

SOIL

Sampling Point: 30.8-1 01

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	2.5 YR 2.5/1	100					Clay loam	A lot of roots
4-14	5 Y 4/1	100					Clay loam	A lot of roots

[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: Roots

Depth (inches): ___

Hydric Soil Present? Yes ✓ No ___

Remarks:

Saturated soils with a lot of roots. Difficult to dig.

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:

Surface water present in August. Perennial feature.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Riverside Sampling Date: 8/26/20

Applicant/Owner: State: CA Sampling Point: 31.5-2 01

Investigator(s): S. Barrera, R. Schartau Section, Township, Range:

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

Subregion (LRR): C Lat: 33.7596 Long: -117.467061 Datum:

Soil Map Unit Name: Ramona sandy loam, 0 to 5 percent slopes, severely eroded NWI classification: PEM1Cx

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:

Located in created mitigation area. No permission to dig pit - soils assumed hydric. PEM1Cx = Palustrine, emergent, persistent, seasonally flooded, excavated

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix goodinggi	45	Y	FACW
2. Salix laevigata	45	Y	FACW
3.			
4.			
	90 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 6x8)			
1. Typha sp.	100	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	100 = 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: 4 (A)

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	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:

SOIL

Sampling Point: 31.5-2 01

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 permission to dig - soils assumed hdyric based on NWI mapping as wetlands

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): ___

Wetland Hydrology Present? **Yes** ✓ **No** ___

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

Remarks:

Water collected at culvert. Dry upstream of typha patch.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Riverside Sampling Date: 8/13/20

Applicant/Owner: State: CA Sampling Point: 32.6-2 01

Investigator(s): S. Barrera, R. Schartau Section, Township, Range:

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

Subregion (LRR): C Lat: 33.7691538526333 Long: -117.481581464467 Datum:

Soil Map Unit Name: altamont clay, 5 to 15 percent slopes NWI classification: None

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

Are Vegetation ____, 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:

Swale/depression collecting water from hillsides to the west. Culvert blocked, likely resulting in some water retention at culvert. No water present at time of survey.

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. Distichlis spicata	100	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	100 = 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: 1 (B)

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	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:

SOIL

Sampling Point: 32.6-2 01

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
0-6	7.5 YR 3/5	75						about 25% small pebbles

[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 too rocky to dig >6"

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:

Veg flattened in direction of presumed flow, area maintained. OHWM barely visible upstream, not consistent. Vegetation likely only supported at culvert due to blocked culvert holding water at some point.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Riverside Sampling Date: 8/12/20

Applicant/Owner: State: CA Sampling Point: 33.8-1 01

Investigator(s): S. Barrera, R. Schartau Section, Township, Range:

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

Subregion (LRR): C Lat: 33.7843370662 Long: -117.492502405133 Datum:

Soil Map Unit Name: Garretson gravelly very fine sandy loam, 2 to 8 percent slopes NWI classification: PSSA

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:

Dry channel with leaf debris in bottom. No hydrophytic vegetation so no soil pit was dug. PSSA = Palustrine, scrub-shrub, temporary flooded

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Tamarisk aphylla (cf)	20	Y	FAC
2. Sambucus nigra	25	Y	FACU
3.			
4.			
	45	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1. Mulefat	15	Y	FAC
2.			
3.			
4.			
5.			
	15	= Total Cover	
Herb Stratum (Plot size: ____)			
1. Artemisia californica	30	Y	UPL
2. Hirschfeldia incana	20	Y	UPL
3. Pseudognaphalium californicum	10	N	UPL
4.			
5.			
6.			
7.			
8.			
	60	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____	= Total Cover	

% Bare Ground in Herb Stratum 40 % Cover of Biotic Crust ____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species ____	x 1 =	____
FACW species ____	x 2 =	____
FAC species 35	x 3 =	105
FACU species 25	x 4 =	100
UPL species 60	x 5 =	300
Column Totals: 120 (A)		505 (B)

Prevalence Index = B/A = 4.20

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:

Tamarisk, mulefat, CA sagebrush, Sambucus nigra, Hirschfeldia incana in channel. Hirschfeldia incana on adjacent upland slopes.

SOIL

Sampling Point: 33.8-1 01

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:

Rocky, cobbley substrate. No soil pit.

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:

Dry ephemeral channel. Appears to have been channelized upstream, so no longer supports natural hydrology.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Corona/Riverside Sampling Date: 08/12/20

Applicant/Owner: State: CA Sampling Point: 33.8-3 01

Investigator(s): S. Barrera, R. Schartau Section, Township, Range:

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

Subregion (LRR): C Lat: 33.78469 Long: -117.492955 Datum:

Soil Map Unit Name: Concrete NWI classification: None

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

Are Vegetation , 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:

Due to dominance of OBL vegetation, no pit needed. Surface water in channel, cannot see depth of water or soil.

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. Typha domingensis (cf)	95	Y	OBL
2. Salix lasiolepis (on banks outside of channel)	3	N	FACW
3.			
4.			
5.			
6.			
7.			
8.			
	98 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 2 % Cover of Biotic Crust

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	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:

Almost completely Typha dominated (cf).

SOIL

Sampling Point: 33.8-3 01

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 pit due to concrete lining, no access, presence of OBL vegetation.

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): at least 2

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:

Can't tell depth for certain due to lack of access and dense vegetation cover.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Riverside Sampling Date: 8/12/20

Applicant/Owner: State: CA Sampling Point: 35.7-1 01

Investigator(s): S. Barrera, R. Schartau Section, Township, Range:

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

Subregion (LRR): C Lat: 33.80488 Long: -117.508958 Datum:

Soil Map Unit Name: Placentia cobbly fine sandy loam, 8 to 25 percent slopes NWI classification: R4SBA

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:

Culvert inlet with standing water. Large rock rip-rap on banks, 48" cmp at culvert. Rip-rap in bottom, too. R4SBA = Riverine, Intermittent, Streambed

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. Lepidium latifolium	100	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	100 = 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: 1 (B)

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	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:

100% pepperweed in incised channel inlet.

SOIL

Sampling Point: 35.7-1 01

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:

8" standing water, no soil pit conducted. Large rock rip-rap in bottom, cannot dig.

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): 8

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:

Upland veg is dead NNG-can't ID. Transitions to no veg/duckweed upstream. Upstream of standing water is sunflower in channel.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Riverside Sampling Date: 8/25/20

Applicant/Owner: State: CA Sampling Point: 37.2-1 01

Investigator(s): S. Barrera, R. Schartau Section, Township, Range:

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

Subregion (LRR): C Lat: Long: Datum:

Soil Map Unit Name: Cortina Gravelly Coarse Sandy Loam, 2 to 8 percent slopes 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 , 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:

Pit conducted in cattail patch at bottom of basin.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix goodingii	30	Y	FACW
2. Tamarix aphylla (c.f.)	30	Y	FACW
3.			
4.			
	60 = Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1. Typha sp. (dead)	90	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	90 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
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: 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:

✓ 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:

Basin support OBL vegetation at lowest elevation.

SOIL

Sampling Point: 37.2-1 01

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
0-2	7.5 YR 3/4	100					Loamy sa	Mulch mixed in
2-5	7.5 YR 3/4	50	7.5 YR 4/4	50			Loamy sa	

[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:

Very compacted soil, hard to dig.

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:

Check historic aerials for when basin was created and seasonal surface water.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: I-15 ELPSE City/County: Riverside Sampling Date: 8/25/20

Applicant/Owner: State: CA Sampling Point: 37.2-1 02

Investigator(s): S. Barrera, R. Schartau Section, Township, Range:

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

Subregion (LRR): C Lat: 33.824816 Long: -117.523675 Datum:

Soil Map Unit Name: Cortina Gravelly Coarse Sandy Loam, 2 to 8 percent slopes 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 _____, 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:

Pit conducted in area just outside of cattail patch where herbaceous layer transitions to upland species.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix goodingii	30	Y	FACW
2. Tamarix aphylla (c.f.)	30	Y	FACW
3.			
4.			
	60	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1. Ricinus communis	25	Y	UPL
2.			
3.			
4.			
5.			
	25	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Bromus madritensis	30	Y	UPL
2. Centaurea melatensis	30	Y	UPL
3.			
4.			
5.			
6.			
7.			
8.			
	60	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 40 % Cover of Biotic Crust 0

Dominance Test worksheet:

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

✓ 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:

Paired point conducted in dry area outside of cattail patch. Vegetation quickly transitions to upland species, with same tree canopy.

SOIL

Sampling Point: 37.2-1 02

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10 YR 4/3	100					Loamy sa	Mulch mixed in

[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:

Very compacted soil, hard to dig. No redox

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:

Check historic aerials for when basin was created and seasonal surface water.

Appendix C. Jurisdictional Delineation Results Table

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Table A: Details of Jurisdictional Delineation Results and Potential Resource Agency Jurisdiction

Feature ID	Substrate	Flow Regime	Constructed in Uplands?	USACE (Section 404)					RWQCB (Section 401/Porter-Cologne)					CDFW (Section 1602)					Notes
				Likely Jurisdictional Status	OHWM Width (feet)	Area (Acres)			Likely Jurisdictional Status	OHWM Width (feet)	Area (Acres)			Likely Jurisdictional Status	Bank-to-Bank Width (feet)	Area (Acres)			
						Non-Jurisdictional	Non-wetland	Wetland			Non-Jurisdictional	Non-wetland	Wetland			Non-Jurisdictional	Potential Streambed	Potential Riparian	
21.5-1 (Wasson Canyon Wash)	Earthen and Concrete	Ephemeral		Jurisdictional	2-40	_	0.408	_	Jurisdictional	2-40	_	0.408	_	Jurisdictional	17-106	_	0.822	_	Earthen channel with some Arundo between SB and NB bridges. Enters JSA on east side as braided channels in sandy substrate. Transitions to concrete towards west side of JSA.
22.5-1	Concrete	Ephemeral		Jurisdictional	7	_	0.061	_	Jurisdictional	7	_	0.061	_	Jurisdictional	7	_	0.061	_	Ephemeral concrete channel
22.6-1 (Arroyo Del Toro West Segment)	Concrete	Ephemeral		Jurisdictional	14	_	0.104	_	Jurisdictional	14	_	0.104	_	Jurisdictional	14	_	0.104	_	Ephemeral concrete box channel. Unvegetated.
22.6-2 (Arroyo Del Toro)	Earthen	Ephemeral		Jurisdictional	68	_	0.214	_	Jurisdictional	68	_	0.214	_	Jurisdictional	68	_	0.214	_	Ephemeral concrete box channel. Unvegetated
23.0-1	Earthen and Rock Rip-rap	Ephemeral		Jurisdictional	2-4	_	0.005	_	Jurisdictional	2-4	_	0.005	_	Jurisdictional	4-6	_	0.006	_	Culvert from slope conveys flows across short area in shoulder and into culvert that conveys flows under freeway
23.1-1	Concrete	Ephemeral		Jurisdictional	2	_	0.004	_	Jurisdictional	2	_	0.004	_	Jurisdictional	6	_	0.004	_	Ephemeral concrete chanel.
23.2-1	Concrete	Ephemeral		Jurisdictional	3	_	0.003	_	Jurisdictional	3	_	0.003	_	Jurisdictional	4	_	0.004	_	Culvert from high school, no water stains visible on concrete. OHWM based on width of low-flow channel in concrete.
23.3-1	Concrete	Ephemeral		Jurisdictional	2	_	0.001	_	Jurisdictional	2	_	0.001		Jurisdictional	4	_	0.001	_	Ephemeral concrete channel.
23.3-2	Concrete	Ephemeral		Jurisdictional	2	_	0.001	_	Jurisdictional	3	_	0.001	_	Jurisdictional	3	_	0.002	_	Ephemeral concrete channel
23.4-1	Earthen	Ephemeral		Jurisdictional	4-16	_	0.039	_	Jurisdictional	4-16	_	0.039	_	Jurisdictional	43	_	0.094	_	Ephemeral channel with alluvial fan sagescrub and sandy soil. Flows enter 16x6 ft. box culvert.
24.0-1	Earthen	Ephemeral		Jurisdictional	2	_	0.002	_	Jurisdictional	2	_	0.002	_	Jurisdictional	4-20	_	0.017	_	Concrete apron at culvert inlet. Culvert outlet turns into sheet flow.
24.2-1	Concrete	Ephemeral	X	Non-jurisdictional	2	0.036	_	_	Non-jurisdictional	2	0.036	_	_	Non-jurisdictional	3	0.054	_	_	Ephemeral concrete V-ditch. Unvegetated. Constructed in uplands
24.2-2	Earthen	Ephemeral		Jurisdictional	1	_	0.002	_	Jurisdictional	1	_	0.002	_	Jurisdictional	1-2	_	0.005	_	Culvert obscured by large rock rip rap. Earthen channel. Conveys flows from freeway directly into Temescal Creek
24.3-1	Earthen	Ephemeral		Jurisdictional	2-5	_	0.004	_	Jurisdictional	2-5	_	0.004	_	Jurisdictional	3-5	_	0.006	_	Epemeral unvegetated streambed, bedrock stream channel at inlet. Outlet sandy with small rocks, channel flows directly to creek across access road. Collects flows from Feature 24.3-3
24.3-2 (Temescal Wash)	Earthen	Perennial		Jurisdictional	0	_	_	0.895	Jurisdictional	0	_	_	0.895	Jurisdictional	40	_	_	0.895	Channel runs parallel to freeway between MM 24.3-24.6
24.3-3	Earthen	Ephemeral		Jurisdictional	2	_	0.006	_	Jurisdictional	2	_	0.006	_	Jurisdictional	_	_	0.016	_	Bedrock stream channel.hannel at bottom of canyon. substrate is bedrock with dry herbaceous sparse coverage. not sure if usace. approx 2' wide channel bottom based on shape of channel. Connects under freeway with 24.3-1
24.5-1	Earthen	Ephemeral		Jurisdictional	5	_	0.003	_	Jurisdictional	5	_	0.003	_	Jurisdictional	5	_	0.015	_	Feature drains across road and into Temescal Wash. Unvegetated, gravely soils in access road. Ponding area along road outlets to Temescal Creek
24.6-1	Earthen	Ephemeral		Jurisdictional	3	_	0.005	_	Jurisdictional	3	_	0.005	_	Jurisdictional	3	_	0.023	_	Culvert outlet has rocky cobble, sandy gravel with upland veg. Connection with 24.6-2. Drains into Temescal Creek
24.6-2	Earthen	Ephemeral		Jurisdictional	2	_	0.004	_	Jurisdictional	2	_	0.004	_	Jurisdictional	3	_	0.006	_	Upland veg, perennial and herbs on banks. Dead herbs in channel.Connection with 24.6-1
24.7-1	Earthen	Ephemeral		Jurisdictional	2	_	0.004	_	Jurisdictional	2	_	0.004	_	Jurisdictional	4	_	0.008	_	Channel comes out of culvert, soil and rock substrate. Dense RSS, upland veg, dead NNG and mustard along banks. 1ft BH. Drains into Temescal Creek
24.8-1	Earthen	Ephemeral	X	Non-jurisdictional	1	0.011	_	_	Non-jurisdictional	1	0.011	_	_	Non-jurisdictional	3	0.032	_	_	Excavated earthen channel constructed in uplands to direct stormwater flows from reaching hwy. See hydro data. Completely vegetated by upland shrubs Drains upland runoff.
25.1-1	Earthen	Ephemeral		Jurisdictional	6	_	0.013	_	Jurisdictional	6	_	0.013	_	Jurisdictional	11-15	_	0.030	_	Ephemeral channel. Culvert outlet has upland veg, dead NNG with coarse soil and rocky gravel. Motorcycle tracks in channel. Connected to 25.1-2.

Table A: Details of Jurisdictional Delineation Results and Potential Resource Agency Jurisdiction

Feature ID	Substrate	Flow Regime	Constructed in Uplands?	USACE (Section 404)					RWQCB (Section 401/Porter-Cologne)					CDFW (Section 1602)					Notes
				Likely Jurisdictional Status	OHWM Width (feet)	Area (Acres)			Likely Jurisdictional Status	OHWM Width (feet)	Area (Acres)			Likely Jurisdictional Status	Bank-to-Bank Width (feet)	Area (Acres)			
						Non-Jurisdictional	Non-wetland	Wetland			Non-Jurisdictional	Non-wetland	Wetland			Non-Jurisdictional	Potential Streambed	Potential Riparian	
25.1-2	Earthen	Ephemeral		Jurisdictional	3-4	_	0.004	_	Jurisdictional	3-4	_	0.004	_	Jurisdictional	18-20	_	0.017	_	Cobble earthened bottom. Upland herbs and shrubs. See hydro data. 3-4 ft OHWM, break in veg in ordinary channel. Connected to 25.1-1
25.2-1 (Temescal Wash)	Earthen	Perennial		Jurisdictional	15	_	_	0.028	Jurisdictional	15	_	_	0.028	Jurisdictional	30	_	_	0.073	Match CDFW boundary to veg poly exent.
25.3-1	Eathern	Ephemeral		Jurisdictional	3-7	_	0.010	_	Jurisdictional	3-7	_	0.010	_	Jurisdictional	3-15	_	0.014	_	Ephemeral channel. Culvert outlet has upland veg, dead NNG and coarse sandy, small cobble. 7x5ft culvert.Connection with 25.3-2
25.3-2	Earthen	Ephemeral		Jurisdictional	4-7	_	0.012	_	Jurisdictional	4-7	_	0.012	_	Jurisdictional	6-12	_	0.036		Ephemeral channel. Culvert inlet has upland veg. with dead NNG and sandy cobble. Connection with 25.3-1
25.3-3	Earthen	Ephemeral	X	Non-jurisdictional	5	0.011	_	_	Non-jurisdictional	5	0.011	_	_	Non-jurisdictional	6	0.032	_	_	Upland vegetation. Coarse sand, cobble.Lack of veg in channel, no noticedable bed and bank
25.3-4	Earthen	Ephemeral		Jurisdictional	4	_	0.007	_	Jurisdictional	4	_	0.007	_	Jurisdictional	7	_	0.012		Ephemeral channel. Culvert inlet has dead NNG with small rocky cobble, coarse sand. Connects to 25.3-3
25.5-1	Earthen	Ephemeral		Jurisdictional	9-17	_	0.138	_	Jurisdictional	9-17	_	0.138	_	Jurisdictional	17-47	_	0.464	_	Ephemeral channel. Generally unvegetated with coarse sand and cobble. Unvegetated under bridge with grouted riprap.
25.6-1	Concrete	Ephemeral	X	Non-jurisdictional	4.5	0.006	_	_	Non-jurisdictional	4.5	0.006	_	_	Non-jurisdictional	_	0.031	_	_	Concrete apron at culvert inlet. Constructed in uplands, no connectivity with culvert downstream
25.8-1 (Temescal Wash)	Earthen	Perennial		Jurisdictional	20	_	_	0.279	Jurisdictional	20	_	_	0.279	Jurisdictional	75	_	_	1.934	Riparian channel running along freeway between 25.8-26.1 Fence, no access from ROW. Veg at toe of hwy slope Bac pil, Salix, Palm, Nettle. Map CDFW to canopy.
26.2-1	Earthen	Intermittent (Basin)		Jurisdictional	85	_	1.656	_	Jurisdictional	10	_	1.656	_	Jurisdictional	10	_	_	2.396	Basin supporting willow cottonwood forest with some eucs. Connects to Temescal Wash
26.4-1	Earthen	Intermittent (Basin)		Jurisdictional	105	_	_	1.710	Jurisdictional	105	_	_	1.710	Jurisdictional	120	_	_	2.978	Basin that collects flows from Feature 26.2-1 via a culvert at south end. Connects to Temescal Wash via culvert at north end.
26.7-1	Earthen	Ephemeral		Jurisdictional	3-12	_	0.024	_	Jurisdictional	12	_	0.024	_	Jurisdictional	5-24	_	0.056	_	Ephemeral channel. Mostly unvegetated with some sunflower and Euc saplings. Silty overlaying some small riprap potentially. Second ephemeral joins main channel from culvert. Also mostly unvegetated with some sunflower and Euc saplings. Silty overlaying some small riprap potentially. Flows into Temescal Wash
27.0-1	Concrete	Ephemeral	X	Non-jurisdictional	.5	0.001	_	_	Non-jurisdictional	.5	0.001	_	_	Non-jurisdictional	3	0.007	_	_	Ephemeral concrete v-ditch constructed in uplands. V-ditch has sediment and dead non-native weeds and sparse veg.
27.1-1	Earthen	Ephemeral		Jurisdictional	10	_	0.013	_	Jurisdictional	10	_	0.013	_	Jurisdictional	10-15	_	0.021	_	Sparse veg, dead NNG. Sandy cobble. Flows end at Temescal Canyon road and pick up on the otherside. 10x6ft culvert. Connected to 27.1-2
27.1-2	Concrete	Ephemeral		Jurisdictional	10	_	0.033	_	Jurisdictional	10	_	0.033	_	Jurisdictional	10-15	_	0.202	_	Ephemeral channel. Concrete channel inlet and banks. Sediment in channel inlet with rock riprap along banks. Connected to 27.1-1.
27.2-1	Earthen	Ephemeral	X	Non-jurisdictional	1-24	0.099	_	_	Non-jurisdictional	1-24	0.099	_	_	Non-jurisdictional	1-24	0.119	_	_	Small basin with evidence of ponding based on cracked soils and sediment deposition between fwy and frontage road. No defined channel. Possible connection to adjacent feature. wrack against fence line. 10x20ft wide ponded area. NNG at culvert outlet, upland veg.
27.4-1	Earthen	Ephemeral		Jurisdictional	14-18	_	0.034	_	Jurisdictional	14-18	_	0.034	_	Jurisdictional	35-45	_	0.096	_	Ephemeral channel. Upland veg with sandy soils and riprap at outlet with remnant grouted riprap. Individuals of mulefat, 2% cover of the drainage.Construction occurring adjacent to site with silt fence in place.
27.8-1	Earthen	Ephemeral	X	Non-jurisdictional	1	0.004	_	_	Non-jurisdictional	1	0.004	_	_	Non-jurisdictional	4	0.017	_	_	Ephemeral 36" culvert. Vegetated with buckwheat, mustard and thistle. Constructed in uplands to drain runoff from freeway slope and side of Temescal Canyon Road

Table A: Details of Jurisdictional Delineation Results and Potential Resource Agency Jurisdiction

Feature ID	Substrate	Flow Regime	Constructed in Uplands?	USACE (Section 404)					RWQCB (Section 401/Porter-Cologne)					CDFW (Section 1602)					Notes
				Likely Jurisdictional Status	OHWM Width (feet)	Area (Acres)			Likely Jurisdictional Status	OHWM Width (feet)	Area (Acres)			Likely Jurisdictional Status	Bank-to-Bank Width (feet)	Area (Acres)			
						Non-Jurisdictional	Non-wetland	Wetland			Non-Jurisdictional	Non-wetland	Wetland			Non-Jurisdictional	Potential Streambed	Potential Riparian	
27.9-1	Earthen	Ephemeral		Non-jurisdictional (Isolated)	40	0.168	–	–	Jurisdictional (Isolated Riparian)	40	–	–	0.168	Jurisdictional	40	–	–	0.168	Thistle, nettle, willow, woody perennial veg. palm. Roadside ponding area with wetland hydrology. No connection to any other waters.
28.1-1 (Temescal Wash)	Earthen	Perennial		Jurisdictional	4-130	–	1.330	0.218	Jurisdictional	4-130	–	1.330	0.218	Jurisdictional	15-450	–	–	4.957	Temescal Wash with wetland and non-wetland areas. Dense riparian canopy. North edge of USACE braided with shelving, debris, wrack, Active channel under bridge, unvegetated with coarse, sandy cobble bottom.
28.2-1	Earthen	Ephemeral		Non-jurisdictional (Isolated)	1-4	0.002	–	–	Non-jurisdictional (Isolated)	1-4	0.002	–	–	Non-jurisdictional (Isolated)	4-6	0.010	–	–	Ephemeral. Perennial RSS species throughout channel, sandy bottom. Evidence of mowing and vehicles in channel, loses ordinary high, turns to sheet flow. Isolated
28.4-1	Earthen	Ephemeral		Jurisdictional	7-27	–	0.067	–	Jurisdictional	7-27	–	0.067	–	Jurisdictional	14-65	–	0.229	–	Ephemeral channel. Unvegetated with sand, rocky cobble. Can't follow to outlet on east side of I-15, but likely connects to Temescal Wash.
28.6-1	Earthen	Ephemeral		Jurisdictional	2	–	0.004	–	Jurisdictional	2	–	0.004	–	Jurisdictional	4	–	0.007	–	dry sandy channel at toe of hwy berm. fence prohibits access. 2 elderberry and 1 possible willow, upland herbacous layer on banks. Mapped based on topographic lines due to lack of access. Appears to connect to Temescal Wash via underground storm drain.
28.9-1	Concrete	Ephemeral		Jurisdictional	6	–	0.007	–	Jurisdictional	6	–	0.007	–	Jurisdictional	25	–	0.026	–	Ephemeral concrete box culvert. Unvegetated. Appears to connect to Temescan Cyn Wash via underground.
29.1-1	Earthen	Ephemeral		Jurisdictional	15-54	–	0.324	–	Jurisdictional	15-54	–	0.324	–	Jurisdictional	45-110	–	1.127	–	Ephemeral channel. Mostly unvegetated, coarse sand, medium cobble and rock bottom, riprap banks. Conducts flow under I-15, active channel shows signs of flow throughout floodplain.
29.6-1	Earthen	Ephemeral		Jurisdictional	2-9	–	0.003	–	Jurisdictional	2-9	–	0.003	–	Jurisdictional	10-19	–	0.009	–	Ephemeral channel with coarse sand bottom. Cottonwood saplings growing on outlet apron. 72" corrugated metal culvert conducts flow under I-15.
30.0-1 (Indian Wash)	Earthen	Ephemeral		Jurisdictional	14-52	–	0.452	–	Jurisdictional	14-52	–	0.452	–	Jurisdictional	14-92	–	0.898	–	Some RAFSS species, non native tree tabacco and castor bean along channel edge with coarse sand. Riprap along banks under bridge.
30.2-1	Earthen	Ephemeral		Jurisdictional	3.5-4	–	0.008	–	Jurisdictional	3.5-4	–	0.008	–	Jurisdictional	4	–	0.075	–	Disturbed area with riparian vegetation (mulefat, stinging nettle and one willow tree). Channel is higher elevation then adjacent pit. Soil hard compact. Sloped.
30.2-2	Earthen/Concrete	Ephemeral		Jurisdictional	1-6	–	0.138	–	Jurisdictional	1-6	–	0.138	–	Jurisdictional	3-8	–	0.163	–	Ephemeral concrete v-ditch runs parallel to I-15 southbound onramp between 30.2-30.4, receives runoff from a shopping center. Wrack pushed up against culvert grate. Bio engineered mesh netting of soil with rock riprap.Typha on south end of culvert.
30.3-1	Earthen	Intermittent		Jurisdictional	6-10	–	–	0.033	Jurisdictional	6-10	–	–	0.033	Jurisdictional	7-92	–	–	0.218	Area fed by several culverts, one of which is intermittent, supporting wetlands and riparian vegetation. Connects to Temescal Wash.
30.4-1	Earthen	Ephemeral		Jurisdictional	12	–	0.049	–	Jurisdictional	12	–	0.049	–	Jurisdictional	25	–	0.976	–	Ephemeral within JSA, running water just upstream of JSA, but water must percolate into sandy soil before reaching JSA.
30.4-2	Asphalt	Ephemeral	X	Non-jurisdictional	1	0.001	–	–	Non-jurisdictional	1	0.001	–	–	Non-jurisdictional	3	0.002	–	–	Ephemeral, asphalt ditch conveying runoff from freeway.
30.4-3	Earthen	Ephemeral	X	Non-jurisdictional	2	0.004	–	–	Non-jurisdictional	2	0.004	–	–	Non-jurisdictional	4	0.008	–	–	Ephemeral. Constructed earthen swale collecting runoff from slope next to freeway and conveying into culvert. No OHWM indicators, width based on width of bottom of swale. Upland NNG vegetation
30.5-1	Earthen and Rip rap	Ephemeral		Jurisdictional	4	–	0.008	–	Jurisdictional	4	–	0.008	–	Jurisdictional	10	–	0.020	–	Ephemeral. Rip rap at culvert and 12' upstream, then earthen. Upland vegetation NNG in upstream portion of channel. Measure rip rap/CDFW on aerial.
30.8-1	Earthen	Intermittent		Non-Jurisdictional (Isolated Wetland)	6	0.038	–	–	Jurisdictional (Isolated Wetland)	6	–	–	0.038	Jurisdictional (Isolated Riparian)	30	–	–	0.404	Willow sp, bulrush in portion of channel in ROW. Wetlands mapped for channel beyond fence due to lack of access. CDFW boundary extends to edge of riparian vegetation

Table A: Details of Jurisdictional Delineation Results and Potential Resource Agency Jurisdiction

Feature ID	Substrate	Flow Regime	Constructed in Uplands?	USACE (Section 404)					RWQCB (Section 401/Porter-Cologne)					CDFW (Section 1602)					Notes
				Likely Jurisdictional Status	OHWM Width (feet)	Area (Acres)			Likely Jurisdictional Status	OHWM Width (feet)	Area (Acres)			Likely Jurisdictional Status	Bank-to-Bank Width (feet)	Area (Acres)			
						Non-Jurisdictional	Non-wetland	Wetland			Non-Jurisdictional	Non-wetland	Wetland			Non-Jurisdictional	Potential Streambed	Potential Riparian	
30.9-1	Earthen	Ephemeral	X	Non-jurisdictional	2	0.008	_	_	Non-jurisdictional	2	0.008	_	_	Non-jurisdictional	2	0.008	_	_	Earthen roadside swale constructed in uplands, conveying roadside runoff into drop drain.
31.0-1	Earthen	Ephemeral	X	Non-jurisdictional	5	0.006	_	_	Non-jurisdictional	5	0.006	_	_	Non-jurisdictional	7	0.008	_	_	No veg in channel, buckwheat on banks. Created channel, to keep irrigation from reaching freeway (likely irrigation from mitigation area)
31.0-2	Earthen	Ephemeral		Jurisdictional	2	_	0.003	_	Jurisdictional	2	_	0.003	_	Jurisdictional	6	_	0.008	_	Ungrouted rock rip rap. Deep channel originating at culvert, meanders out of JSA into concrete culvert. Conveys flows into Temescal Wash. Upland vegetation, NNG, buckwheat, ca sagebrush.
31.0-3	Earthen	Ephemeral	X	Non-jurisdictional	1-2	0.006	_	_	Non-jurisdictional	1-2	0.006	_	_	Non-jurisdictional	3	0.014	_	_	Swale on slope drains into "depression" area with multiple drop drains but no OHWM to the north. Constructed in uplands.
31.2-1	Earthen	Ephemeral	X	Non-jurisdictional	2	0.002	_	_	Non-jurisdictional	2	0.002	_	_	Non-jurisdictional	4	0.003	_	_	Short roadside swale that flows into drop drain
31.2-2	Concrete	Ephemeral	X	Non-jurisdictional	1-4	0.011	_	_	Non-jurisdictional	1-4	0.011	_	_	Non-jurisdictional	3-8	0.029	_	_	Ephemeral concrete ditch constructed in uplands. Only draining roadside runoff and runoff from irrigation on slope above ditch. Channel widens here before ending in drop drain. OHWM ID by water staining on concrete.
31.3-1	Earthen	Ephemeral	X	Non-jurisdictional	.5-1	0.017	_	_	Non-jurisdictional	.5-1	0.017	_	_	Non-jurisdictional	1-4	0.053	_	_	Earthen brow ditch constructed in uplands with erosion rill coming off irrigated hillside in upland area.
31.3-2	Earthen and Concrete	Ephemeral	X	Non-jurisdictional	1	0.002	_	_	Non-jurisdictional	1	0.002	_	_	Non-jurisdictional	3	0.005	_	_	Tamariskon banks and in “depression” at bottom of slope. Point collected where transitions from concrete to earthen. Earthen ditch conveys flows into drop drain
31.4-1	Concrete	Ephemeral	X	Non-jurisdictional	1	0.012	_	_	Non-jurisdictional	1	0.012	_	_	Non-jurisdictional	3	0.036	_	_	Conveying flows from slope/concrete lined v-ditch on slope to drop drain.
31.4-2	Earthen	Ephemeral		Jurisdictional	3-18	_	0.063	_	Jurisdictional	3-18	_	0.063	_	Jurisdictional	6-20	_	0.075	_	No vegetation in channel, buckwheat, coyotebush, nicotiana, mule fat, tamarisk on slopes. Mule fat and tamarisk are not dominants. Lined with boulder rip rap. No culvert visible at top of features
31.5-1	Earthen	Ephemeral	X	Non-jurisdictional	1.5-2	0.012	_	_	Non-jurisdictional	1.5-2	0.012	_	_	Non-jurisdictional	4	0.027	_	_	Earthen brow ditch constructed in uplands draining to bottom of slope by freeway
31.5-2	Earthen	Intermittent		Jurisdictional	8	_	_	0.034	Jurisdictional	8	_	_	0.034	Jurisdictional	16	_	0.068	_	Earthen channel with Cattails 6’x8’ at culvert. No vegetation in channel south of cattails. Arroyo willow on lower banks. Buckwheat scrub (buckwheat, black sage, encelia farinosa) on upland banks
31.5-3	Earthen	Ephemeral		Jurisdictional	1	_	0.002	_	Jurisdictional	1	_	0.002	_	Jurisdictional	3	_	0.006	_	Pipe culvert from irrigated slope outlets into JSA. Flows are conveyed into pipe and under I-15 into Feature 31.6-2.
31.5-4	Earthen	Ephemeral		Jurisdictional	1	_	0.003	_	Jurisdictional	1	_	0.003	_	Jurisdictional	3	_	0.010	_	Earthen, incised channel with non-native grasses and buckwheat scrub vegetation. No culvert found at top. Flows into concrete culvert outside of JSA and is eventually tributary to Temescal Wash. Portions mapped using aerial and topographic lines due to lack of access.
31.6-1	earthen	Ephemeral		Jurisdictional	2	_	0.008	_	Jurisdictional	2.000	_	0.008	_	Jurisdictional	6	_	0.023	_	Earthen channel conveys water from hillside into culvert near I-15. Connects to 31.7-1 at culvert
31.6-2	Earthen	Ephemeral		Jurisdictional	2	_	0.005	_	Jurisdictional	2	_	0.005	_	Jurisdictional	4	_	0.012	_	2 channels converge, conveying runoff from hillside and freeway.
31.6-3	Earthen	Ephemeral		Jurisdictional	2	_	0.007	_	Jurisdictional	2	_	0.007	_	Jurisdictional	5	_	0.018	_	Deeply incised channel with upland vegetation (CSS). No visible culvert but hillside eroded to show 3-4” pvc pipe under channel.
31.7-1	Concrete	Ephemeral	X	Non-jurisdictional	1-3	0.015	_	_	Non-jurisdictional	1-3	0.015	-	-	Non-jurisdictional	3-6	0.036	_	_	Concrete brow ditch constructed in uplands. Conveys flows into channel at north end.

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Feature ID	Substrate	Flow Regime	Constructed in Uplands?	USACE (Section 404)					RWQCB (Section 401/Porter-Cologne)					CDFW (Section 1602)					Notes
				Likely Jurisdictional Status	OHWM Width (feet)	Area (Acres)			Likely Jurisdictional Status	OHWM Width (feet)	Area (Acres)			Likely Jurisdictional Status	Bank-to-Bank Width (feet)	Area (Acres)			
						Non-Jurisdictional	Non-wetland	Wetland			Non-Jurisdictional	Non-wetland	Wetland			Non-Jurisdictional	Potential Streambed	Potential Riparian	
31.7-2	Earthen	Ephemeral		Jurisdictional	4	_	0.007	_	Jurisdictional	4	_	0.007	_	Jurisdictional	19	_	0.087	_	Originates in south as incised channel with dry soils, no vegetation in channel. Tamarisk and willow at fence. Tamarisk only downstream of point. OHWM by water staining, shelving, wrack. Connects to concrete v-ditch collecting hillside runoff originating at top of this hill and conveying into culvert at bottom. 31.6-1 flows into channel near culvert
31.7-3	Earthen	Ephemeral		Jurisdictional	2	_	0.004	_	Jurisdictional	2	_	0.004	_	Jurisdictional	3	_	0.021	_	Ephemeral, unvegetated features flows into 36" culvert. Trash and vegetation debris in channel.
31.7-4	Earthen and Rock Rip-rap	Ephemeral		Jurisdictional	16	_	0.034	_	Jurisdictional	16	_	0.034	_	Jurisdictional	32	_	0.077	_	Earthen and rock rip-rap lined channel with upland vegetation in dry channel
31.8-1	Earthen	Ephemeral		Jurisdictional	1-4	_	0.054	_	Jurisdictional	Varies	_	0.054	_	Jurisdictional	4-115	_	0.053	0.107	Earthen feature with riparian canopy, transitioning to swale at toe of concrete slope. Culvert and pipes convey flow from I-15 into swale. Flows across Temescal Cyn road on northeast side of fwy and joins Mayhew Wash outside of JSA
31.8-2	Earthen	Ephemeral		Jurisdictional	2	_	0.005	_	Jurisdictional	2	_	0.005	_	Jurisdictional	8	_	0.019	_	Mustard, nng, sagebrush in channel/slopes. sambucus at culvert. Willows and mule fat downstream of jsa
31.9-1	Earthen	Intermittent		Jurisdictional	10	_	0.036	_	Jurisdictional	10	_	0.036	_	Jurisdictional	10	_	_	0.086	Constructed channel with dense cover of mulefat. Wetland Data Point conducted near culvert. Flows into Mayhew Wash near southbound I-15 Bridge
31.9-2 (Mayhew Wash)	Earthen	Ephemeral		Jurisdictional	4-8	_	0.201	_	Jurisdictional	4-8	_	0.201	_	Jurisdictional	45-165	_	1.407	_	Large earthen channel with several braids and terraces. Separated from Mayhew Wash by high terrace. Joins Mayhew Wash near I-15 Bridge. Wetland data point conducted on low terrace under bridge.
32.1-1	Earthen and Concrete	Ephemeral		Jurisdictional	4	_	0.026	_	Jurisdictional	4	_	0.026	_	Jurisdictional	22	_	0.078	_	Earthen channel at JSA boundary, transitioning to concrete with large concrete headwall and culvert under I-15. Connects to Feature 32.1-2 on NB side of I-15.
32.2-1	Earthen	Ephemeral		Jurisdictional	6	_	0.019	_	Jurisdictional		_	0.019	_	Jurisdictional	18	_	0.046	_	Added as separate drainage label from 32.1-1 to keep with convention used in rest of map
32.3-1	Earthen and Grouted Rip-Rap	Ephemeral		Jurisdictional	1	_	0.002	_	Jurisdictional	1	_	0.002	_	Jurisdictional	5	_	0.011	_	Culvert inlets into grouted rip rap channel, transitioning to earthen downstream of JSA
32.3-2	Earthen and Boulder Rip-Rap	Intermittent		Jurisdictional	4	_	0.010	_	Jurisdictional	4	_	0.010	_	Jurisdictional	6	_	0.069	_	Wet channel, boulder rip rap with upland vegetation in channel (coyote brush, telegraph weed, hirschfeldia incana)
32.5-1	Earthen	Ephemeral	X	Non-jurisdictional	1	0.003	_	_	Non-jurisdictional	1	0.003	_	_	Non-jurisdictional	3	0.009	_	_	Swale starts at top of slope and conveys hillside runoff into ditch by culvert
32.6-1	Earthen and Concrete	Ephemeral		Jurisdictional	2-3	_	0.005	_	Jurisdictional	2-3	_	0.005	_	Jurisdictional	4-6	_	0.011	_	Unvegetated channel. 6x10 mulefat on upper banks, Outside channel.Concrete upstream, transitioning to earthen. Flows under freeway in pipe, outletting into earthen channel with upland vegetation
32.6-2	Earthen	Ephemeral		Jurisdictional	2	_	0.001	_	Jurisdictional	2	_	0.001	_	Jurisdictional	7	_	0.005	_	Depression collecting water from surrounding hillsides with Distichlis spicata at culvert. Flows into conrete culvert with headwall, connecting via underground drain to feature 32.6-1. Conducted Wetland Sample Point, Non-wetland.
32.6-3	Earthen	Ephemeral		Jurisdictional	2	_	0.006	_	Jurisdictional	2	_	0.006	_	Jurisdictional	4	_	0.013	_	12" culvert conveys flows from other side of freeway into earthen channel with upland vegetation
32.8-1	Earthen	Ephemeral	X	Non-jurisdictional	0.5	0.002	_	_	Non-jurisdictional	0.5	0.002	_	_	Non-jurisdictional	1	0.004	_	_	Roadside swale collecting runoff from freeway slope and conveying into drop drain to north
32.9-1 (Coldwater Wash)	Earthen	Ephemeral		Jurisdictional	8-30	_	0.457	_	Jurisdictional	8-30	_	0.457	_	Jurisdictional	66-283	_	2.086	_	Large, sandy wash with multiple braids. Continues under I-15 and eventually tributary to Temescal Wash. Channel mostly unvegetated, but some eucalyptus and castor bean on terrace on NB side of I-15.
33.0-1	Earthen	Ephemeral	X	Non-jurisdictional	2	0.021	_	_	Non-jurisdictional	2	0.021	_	_	Non-jurisdictional	4	0.041	_	_	Unvegetated earthen swale running adjacent to chainlink fence
33.2-1		Ephemeral	X	Non-jurisdictional	1	0.013	_	_	Non-jurisdictional	1.000	0.013	_	_	Non-jurisdictional	8	0.102	_	_	Concrete ditch draining hillside meets with 33.3-1 and drains into 36” cmp

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				Likely Jurisdictional Status	OHWM Width (feet)	Area (Acres)			Likely Jurisdictional Status	OHWM Width (feet)	Area (Acres)			Likely Jurisdictional Status	Bank-to-Bank Width (feet)	Area (Acres)			
						Non-Jurisdictional	Non-wetland	Wetland			Non-Jurisdictional	Non-wetland	Wetland			Non-Jurisdictional	Potential Streambed	Potential Riparian	
33.3-1	Earthen	Ephemeral	X	Non-jurisdictional	3	0.011	_	_	Non-jurisdictional	3	0.011	_	_	Non-jurisdictional	6	0.023	_	_	Earthen swale draining hillside into 36” cmp
33.3-2	Earthen	Ephemeral	X	Non-jurisdictional	1	0.013	_	_	Non-jurisdictional	1	0.013	_	_	Non-jurisdictional	1	0.013	_	_	Roadside erosion rill flowing into drop drain. collecting water from roadside runoff. Non-jd
33.4-1	Concrete	Ephemeral	X	Non-jurisdictional	.5	0.006	_	_	Non-jurisdictional	.5	0.006	_	_	Non-jurisdictional	2	0.026	_	_	Concrete brow ditch.
33.5-1	Earthen	Ephemeral		Jurisdictional	3	_	0.002	_	Jurisdictional	3	_	0.002	_	Jurisdictional	6	_	0.005	_	Feature conveyed into CMP at fence at boundary of JSA. 4'/8' upstream of JSA. Only jurisdictional between CMP and headwall near I-15 where 3'/6'
33.5-2	Earthen	Ephemeral		Jurisdictional	1	_	0.003	_	Jurisdictional	1	_	0.003	_	Non-jurisdictional	1	_	0.003	_	Ephemeral, earthen channel with upland vegetation on banks.
33.6-1	Earthen and Rip-Rap	Ephemeral		Jurisdictional	1-6	_	0.004	_	Jurisdictional	1-6	_	0.004	_	Jurisdictional	3-12	_	0.011	_	Earthen channel with some buried boulder rip rap. 30” and 12” cmp in concrete head wall
33.6-2	Earthen	Intermittent		Jurisdictional	6	_	0.014	_	Jurisdictional	6	_	0.014	_	Jurisdictional	Varies	_	_	0.098	No vegetation in channel. Riparian vegetation (fan palm, cottonwood, willows) on banks. CDFW width to edge of riparian veg. Rectangular concrete culvert conveys flows under freeway.
33.6-3	Earthen	Intermittent		Jurisdictional	6	_	0.014	_	Jurisdictional	6	_	0.014	_	Jurisdictional	Varies	_	_	0.082	Collects flows from 33.6-2. CDFW riparian canopy with sandy gravel in channel.
33.8-1	Earthen	Intermittent		Jurisdictional	2	_	0.005		Jurisdictional	2	_	0.005	_	Jurisdictional	Varies	_	_	0.055	Riparian vegetation mapped to edge of canopy.
33.8-2	Earthen	Ephemeral		Jurisdictional	10-17	_	0.023	_	Jurisdictional	10-17	_	0.023	_	Jurisdictional	18-40	_	0.059	_	Enters JSA on SB side of I-15 as 40' wide channel with earthen bottom and ungrouted rip-rap sides. Flows conveyed into culvert under I-15, connecting to 33.8-4 on northbound side of I-15.
33.8-3	Earthen	Ephemeral / Perennial		Jurisdictional	6	_	0.014	0.019	Jurisdictional	6	_	0.014	0.019	Jurisdictional	10	_	0.023	0.032	Rectangular concrete channel with standing water and 100% cover of cattails.
33.8-4	Earthen	Ephemeral		Jurisdictional	2-6	_	0.008	_	Jurisdictional	2-6	_	0.008	_	Jurisdictional	7-24	_	0.028	_	Collects flows from Feature 33.8-2. Deeply incised channel with vertical sides on south bank. Encelia on banks.
33.9-1	Concrete	Ephemeral	X	Non-jurisdictional	0.5	0.002	_	_	Non-jurisdictional	0.5	0.002	_	_	Non-jurisdictional	2	0.008	_	_	V-ditch conveying freeway runoff into swale at bottom of slope
34.0-1	Concrete	Ephemeral	X	Non-jurisdictional	1	0.014	_	_	Non-jurisdictional	1	0.014	_	_	Non-jurisdictional	1	0.014	_	_	Concrete brow ditch
34.0-2	Earthen and Boulder rip-rap	Ephemeral		Jurisdictional	2	_	0.004	_	Jurisdictional	2	_	0.004	_	Jurisdictional	4	_	_	0.023	Culvert not visible, buried under vegetation. CDFW riparian here to edge of tree canopy. Tamarisk, mule fat, willow
34.1-1	Concrete	Ephemeral	X	Non-jurisdictional	0.5	0.006	_	_	Non-jurisdictional	0.5	0.006	_	_	Non-jurisdictional	1	0.102	_	_	Concrete v-ditch collecting freeway irrigation and road runoff only. Conveys into larger channel to north. V-ditch filled with leaves, and unable to see direct connection to larger channel due to leaf litter
34.2-1	Concrete	Ephemeral	X	Non-jurisdictional	3	0.016	_	_	Non-jurisdictional	3	0.016	_	_	Non-jurisdictional	12	0.065	_	_	Concrete v-ditch collecting road runoff and freeway irrigation only. OHWM on SB side determined based on concrete staining. No OHWM visible on NB side.
34.2-2	Concrete	Ephemeral	X	Non-jurisdictional	1	0.005	_	_	Non-jurisdictional	1	0.005	_	_	Non-jurisdictional	4	0.020	_	_	Ditch conveying slope irrigation runoff only; isolated
34.2-3	Earthen	Ephemeral		Jurisdictional	3	_	0.026	_	Jurisdictional	3	_	0.026	_	Jurisdictional	22	_	0.034	_	Large box culvert with only faint OHWM. OHWM mapped to width of lower portion of box culvert. Streambed mapped to width of concrete. Conveyed into pipe on east end, which is under construction at time of survey.
34.4-1	Concrete	Ephemeral	X	Non-jurisdictional	1	0.028	_	_	Non-jurisdictional	1	0.028	_	_	Non-jurisdictional	3	0.083	_	_	Concrete ditch draining adjacent irrigated slope only
34.7-1 (McBride Canyon Creek)	Concrete	Perennial		Jurisdictional	6	_	0.038	_	Jurisdictional	6	_	0.038	_	Jurisdictional	20	_	0.140	_	Rectangular concrete channel with vertical sides. Water and sediment in channel at time of survey. OHWM determined based on water stains on concrete.
35.5-1	Earthen	Intermittent		Jurisdictional	9	_	0.027	_	Jurisdictional	9	_	0.027	_	Jurisdictional	27	_	0.048	_	Castor bean dominant, small amount of mule fat

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						Non-Jurisdictional	Non-wetland	Wetland			Non-Jurisdictional	Non-wetland	Wetland			Non-Jurisdictional	Potential Streambed	Potential Riparian	
35.6-1	Earthen and Concrete	Ephemeral		Jurisdictional	2.5	-	0.006	_	Jurisdictional	2.5	-	0.006	_	Non-jurisdictional	8	_	0.018	_	Ephemeral roadside culvert. Concrete ditch conveying flows in from off ramp. No ohwm in basin upstream, maybe due to mowing/disturbance. NNG in swale.
35.6-2	Earthen and Concrete	Ephemeral		Jurisdictional	1-3	_	0.005	_	Jurisdictional	1-3	_	0.005	_	Jurisdictional	12-60	_	0.058	_	Two culverts convey flows into earthen channels with narrow ohwm which converge near eucalyptus into a single channel. Channel is grouted rip-rap and concrete lined at ROW. Drains into storm drain. CDFW streambed is extent of basin. Vegetation in basin and on banks is upland (sunflower, tocalote, bromus madritensis, avena sp, white sage)
35.6-3	Concrete	Ephemeral	X	Non-jurisdictional	1	0.004	_	_	Non-jurisdictional	1.000	0.004	_	_	Non-jurisdictional	3	0.011	_	_	Ephemeral v-ditch constructed in uplands. Conveys flows from slope towards drainage 35.6-2 to the south.
35.7-1	Earthen and Ungrouted Rip-Rap	Intermittent		Jurisdictional	2-8	_	_	0.010	Jurisdictional	2-8	_	_	0.010	Jurisdictional	2-8	_	_	0.013	Vegetated culvert (Polygonum lapathifolium) on SB side of freeway. Likely holds water as result of blocked culvert.
35.7-2	Concrete	Ephemeral	X	Non-jurisdictional	0.5	0.004	_	_	Non-jurisdictional	3	0.004	_	_	Non-jurisdictional	3	0.011	_	_	Concrete brow ditch constructed in uplands conveys flows into concrete channel at north end
35.7-3	Concrete	Ephemeral		Jurisdictional	2	_	0.004	_	Jurisdictional	2	_	0.004	_	Jurisdictional	16	_	0.029	_	Concrete v-ditch on NB side, collects flows from 35.7-1.
35.8-1	Concrete	Ephemeral	X	Non-jurisdictional	0.5	0.008	_	_	Non-jurisdictional	0.500	0.008	_	_	Non-jurisdictional	2	0.034	_	_	Brow ditch at top of slope, collecting only runoff from freeway and conveying into storm drain
35.9-1	Asphalt	Ephemeral	X	Non-jurisdictional	2	0.002	_	_	Non-jurisdictional	2	0.002	_	_	Non-jurisdictional	3	0.003	_	_	Roadside runoff only. No indicators of OHWM, width based on bottom of channel
35.9-2	Concrete	Ephemeral	X	Non-jurisdictional	1	0.025	_	_	Non-jurisdictional	1	0.025	_	_	Non-jurisdictional	3	0.075	_	_	Brow ditch at top of slope. Not accessible due to fence/steep slope. Drains freeway only
36.1-1	Earthen	Ephemeral		Jurisdictional	1-5	_	0.007	_	Jurisdictional	1-5	_	0.007	_	Jurisdictional	1-8	_	0.012	_	One culvert conveys runoff from south into small, unvegetated earthen channel. 2nd culvert conveys runoff from street to west and outlets at base of pepper trees into unvegetated earthen channel. Upland vegetation on banks. Two channels join and flow into 48" Concrete culvert conveying runoff under freeway from ditch into 36.1-2.
36.1-2	Concrete	Ephemeral	X	Non-jurisdictional	1	0.014	_	_	Non-jurisdictional	1	0.014	_	_	Non-jurisdictional	3	0.042	_	_	Concrete browditch. No visible ohwm, USACE width based on bottom of channel
36.4-1	Concrete	Ephemeral	X	Non-jurisdictional	1	0.077	_	_	Non-jurisdictional	1	0.077	_	_	Non-jurisdictional	4	0.077	_	_	Concrete v-ditch on side of freeway. Constructed in uplands.
36.5-1 (Bedford Wash)	Earthen	Ephemeral		Jurisdictional	4'-40'	_	0.297	_	Jurisdictional	4'-40'	_	0.297	_	Jurisdictional	30'-105'	_	1.164	_	Bedford Wash. Ephemeral, sandy channel with braids. OHWM based on shelving. Channel mostly unvegetated with some brittlebush scrub on terraces/islands. Mustard/Disturbed and Brittlebush scrub on banks.
36.7-1	Concrete and Grouted riprap	Ephemeral	X	Non-jurisdictional	1-2	0.010	_	_	Non-jurisdictional	1-2	0.010	_	_	Non-jurisdictional	12-254	0.631	_	_	Recently constructed swale to convey upland road runoff into storm drains.
36.8-1	Concrete	Ephemeral	X	Non-jurisdictional	.5	0.005	_	_	Non-jurisdictional	.5	0.005	_	_	Non-jurisdictional	3	0.032	_	_	Concrete brow ditch with three v-ditches draining roadside runoff from Cajalco Road into drop drains in parking lot.
37.0-1	Earthen and Gravel	Ephemeral	X	Non-jurisdictional	1-2	0.019	_	_	Non-jurisdictional	1-2	0.019	_	_	Non-jurisdictional	1-4	0.035	_	_	Feature originates as earthen swale at north end of gore area. Swale has concrete wash-out in it. Roadside runoff is collected via the swale into a gravel area at bottom of gore. Two culverts convey freeway (I-15) and road runoff (Cajalco Road) into gravel basin.
37.0-2	Concrete	Ephemeral	X	Non-jurisdictional	0.5	0.005	_	_	Non-jurisdictional	0.5	0.005	_	_	Non-jurisdictional	2	0.020	_	_	Dry brow ditch conveys flows into road shoulder. Isolated, no apparent flows aside from direct rainfall
37.0-3	Concrete	Ephemeral	X	Non-jurisdictional	0.5	0.008	_	_	Non-jurisdictional	0.5	0.008	_	_	Non-jurisdictional	3	0.048	_	_	Slope drain draining irrigated, planted slopes between freeway and shopping center. 4" wide water stain in middle of v-ditch. Use hydro lines for ditches at top of slope
37.1-1	Earthen	Ephemeral	X	Non-jurisdictional	6	0.007	_	_	Non-jurisdictional	6	0.007	_	_	Non-jurisdictional	12	0.016	_	_	Basin area with two drop drains, collects runoff from freeway shoulder. Isolated, disturbed vegetation only
37.1-2	Asphalt	Ephemeral	X	Non-jurisdictional	1	0.016	_	_	Non-jurisdictional	1.000	0.016	_	_	Non-jurisdictional		0.097	_	_	Roadside swale collecting runoff from freeway to protect slope to east

Table A: Details of Jurisdictional Delineation Results and Potential Resource Agency Jurisdiction

Feature ID	Substrate	Flow Regime	Constructed in Uplands?	USACE (Section 404)					RWQCB (Section 401/Porter-Cologne)					CDFW (Section 1602)					Notes
				Likely Jurisdictional Status	OHWM Width (feet)	Area (Acres)			Likely Jurisdictional Status	OHWM Width (feet)	Area (Acres)			Likely Jurisdictional Status	Bank-to-Bank Width (feet)	Area (Acres)			
						Non-Jurisdictional	Non-wetland	Wetland			Non-Jurisdictional	Non-wetland	Wetland			Non-Jurisdictional	Potential Streambed	Potential Riparian	
37.1-3	Concrete	Ephemeral	X	Non-jurisdictional	2	0.031	_	_	Non-jurisdictional	2	0.031	_	_	Non-jurisdictional	3	0.046	_	_	Constructed in uplands. Draining freeway only; ohwm visible by water staining on concrete; map based on aerial/icf feature
37.2-1	Earthen	Intermittent		Jurisdictional	35	_	0.078	0.007	Jurisdictional	35	_	0.078	0.007	Jurisdictional	50	_	_	0.156	Detention Basin collecting flows from inlet on southwest corner. Flows conveyed under freeway into concrete feature on east side of I-15 (need to verify).Eventually tributary to Temescal Wash. Supports wetland area identified based on limits of cattails.
37.2-2	Concrete	Ephemeral		Jurisdictional	8	_	0.009	_	Jurisdictional	8	_	0.009	_	Jurisdictional	8	_	0.009	_	Rectangular concrete channel with vertical sides. No vegetation. Some concrete staining
37.2-3	Earthen	Intermittent		Jurisdictional	10	_	0.008	_	Jurisdictional	10	_	0.008	_	Jurisdictional	Varies			0.020	Earthen drainage with southern willow scrub riparian vegetation. Area fenced. Appears to be mitigation area. Use hydro line for usace, riparian vegetation for CDFW. Drainage not accessible to determine OHWM or view inlet.
37.9-1	Concrete	Ephemeral	X	Non-jurisdictional	0.5	0.012	_	_	Non-jurisdictional	0.500	0.012	_	_	Non-jurisdictional	2	0.046	_	_	Concrete brow ditch constructed on slope to drain runoff from irrigation into downslope v-ditches.
37.9-2	Concrete	Ephemeral	X	Non-jurisdictional	0.5	0.001	_	_	Non-jurisdictional	0.5	0.001	_	_	Non-jurisdictional	3	0.003	_	_	Concrete downslope v-ditch conveying irrigation water only.
38.0-1	Grouted Rip-Rap	Ephemeral	X	Non-jurisdictional	1	0.001	_	_	Non-jurisdictional	2	0.001	_	_	Non-jurisdictional	6	0.003	_	_	No sign of ohwm, trash in culvert, dead grasses collected in rip rap
38.0-2	Concrete	Ephemeral	X	Non-jurisdictional	.5	0.000	_	_	Non-jurisdictional	.5	0.000	_	_	Non-jurisdictional	3	0.002	_	_	Concrete downslope v-ditch conveying irrigation water only.
38.0-3	Earthen and Concrete	Ephemeral	X	Non-jurisdictional	1	0.001	_	_	Non-jurisdictional	1	0.001	_	_	Non-jurisdictional	4	0.004	_	_	Concrete downslope v-ditch conveying irrigation water into culvert at bottom of slope with gravel/sediment. Water with some vegetation (Mostly bare. Some hirschfeldia, some cheeseweed) at bottom of slope, resulting from irrigation of nearby grass fields. Culverts at toe of slope. North culvert drains irrigation runoff into larger culvert to south
TOTAL						**0.860**	**6.757**	**3.234**			**0.654**	**6.757**	**3.440**			**2.275**	**11.730**	**14.693**	

Appendix D. Jurisdictional Delineation Results Maps

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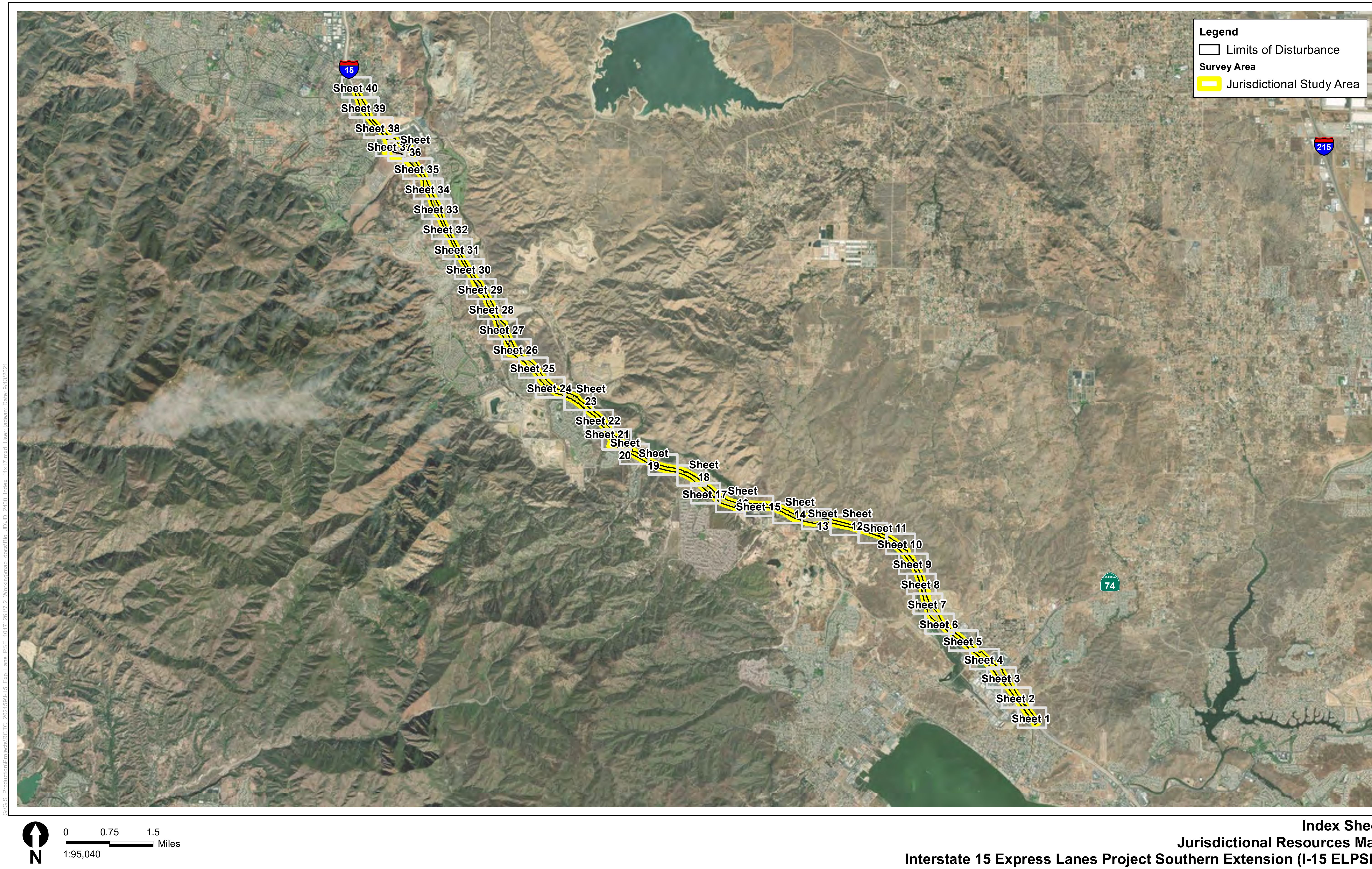
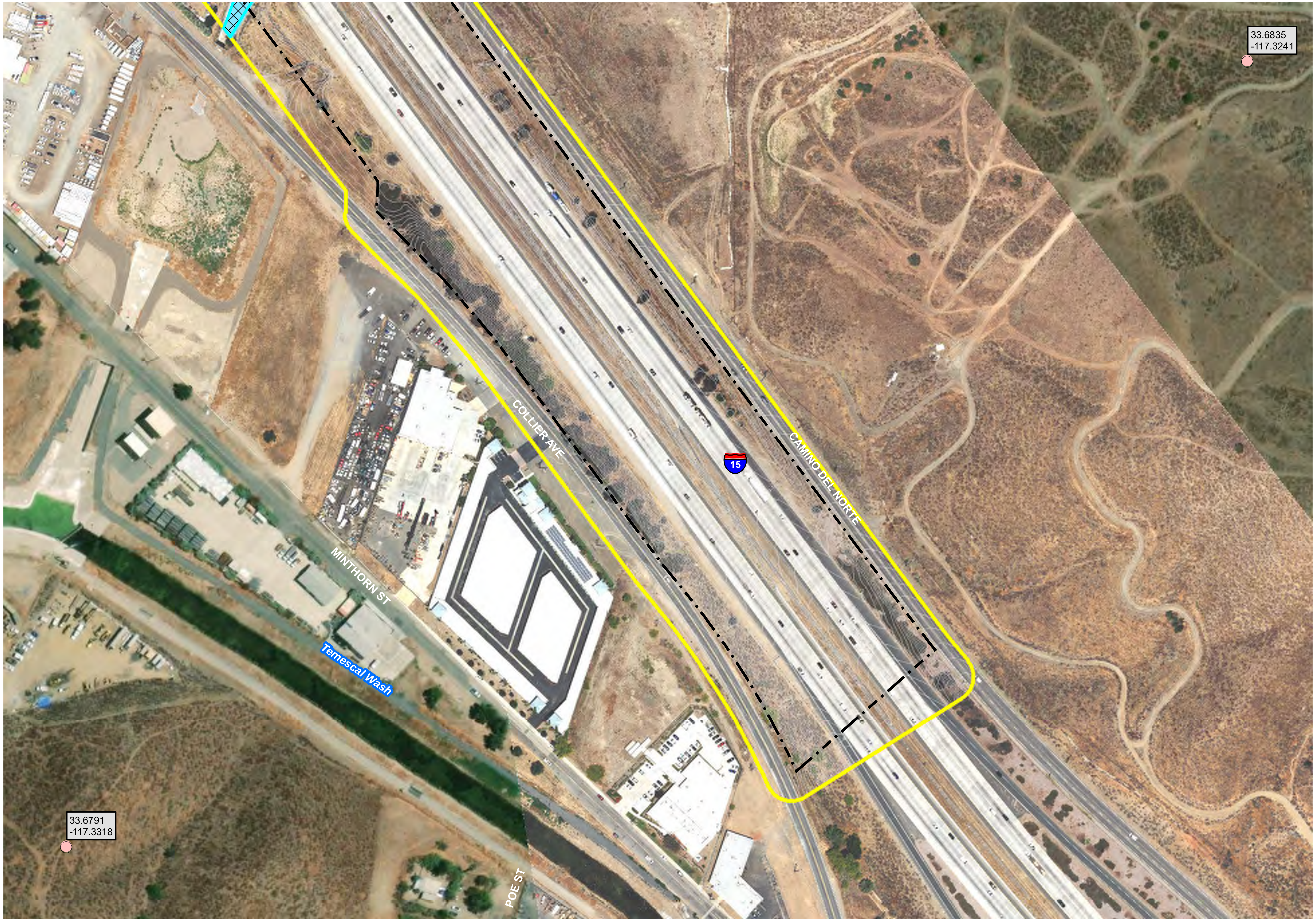


Index Sheet
Jurisdictional Resources Map
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)



Legend

- Limits of Disturbance
- City/County Boundary
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- OHWM (Ephemeral)
- Streambed

*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

N

0 100 200 Feet

1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Sheet 1 of 40

Jurisdictional Resources Map

Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

Legend

- Limits of Disturbance
- City/County Boundary
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- OHWM (Ephemeral)
- Streambed

*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

N

0 100 200 Feet

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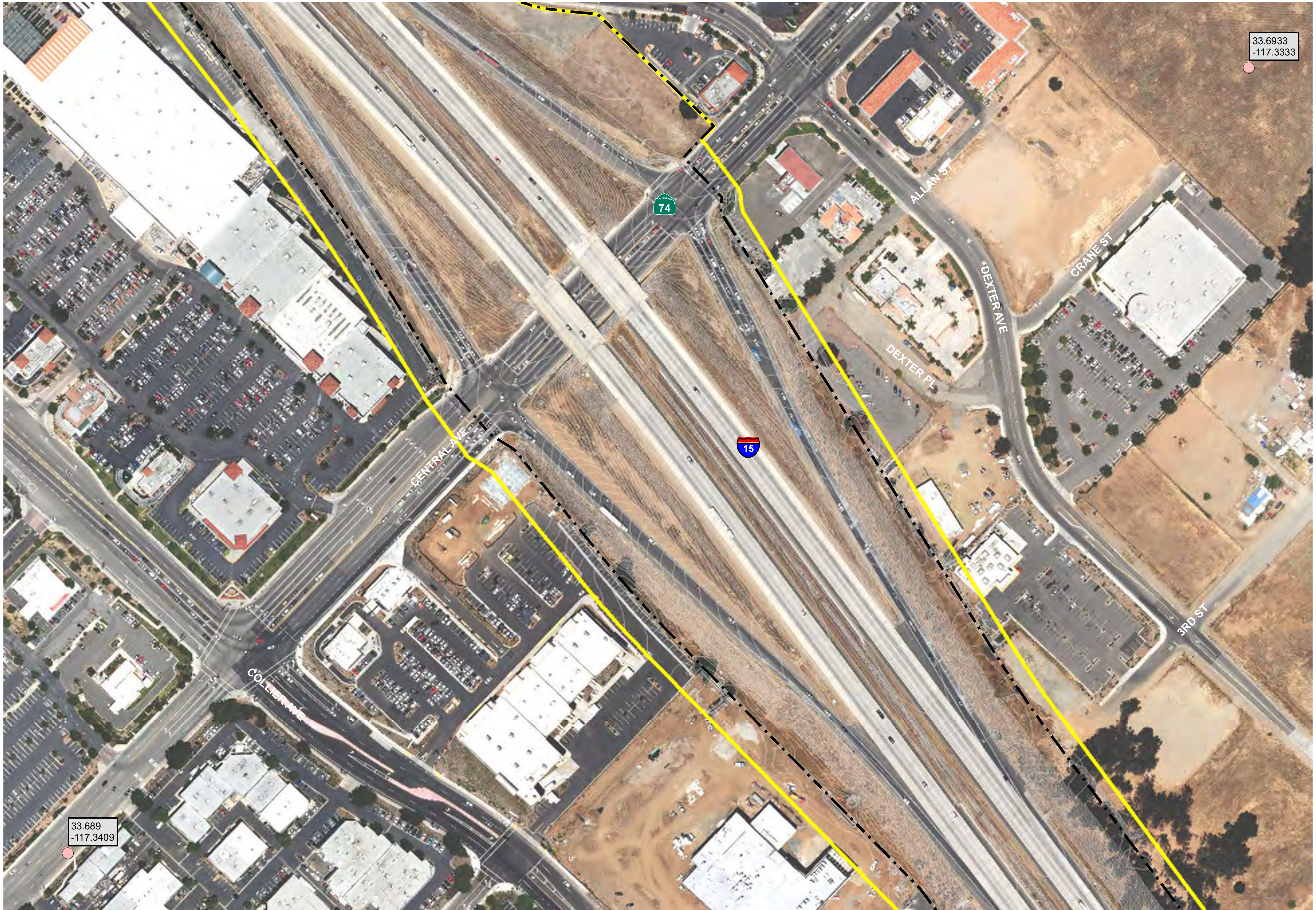
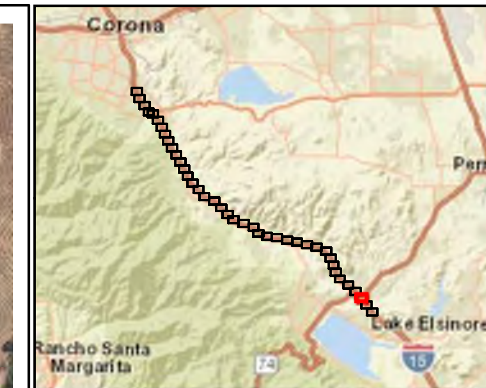
Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Sheet 2 of 40

Jurisdictional Resources Map

Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)





Legend

- Limits of Disturbance
- City/County Boundary
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

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N

0 100 200 Feet

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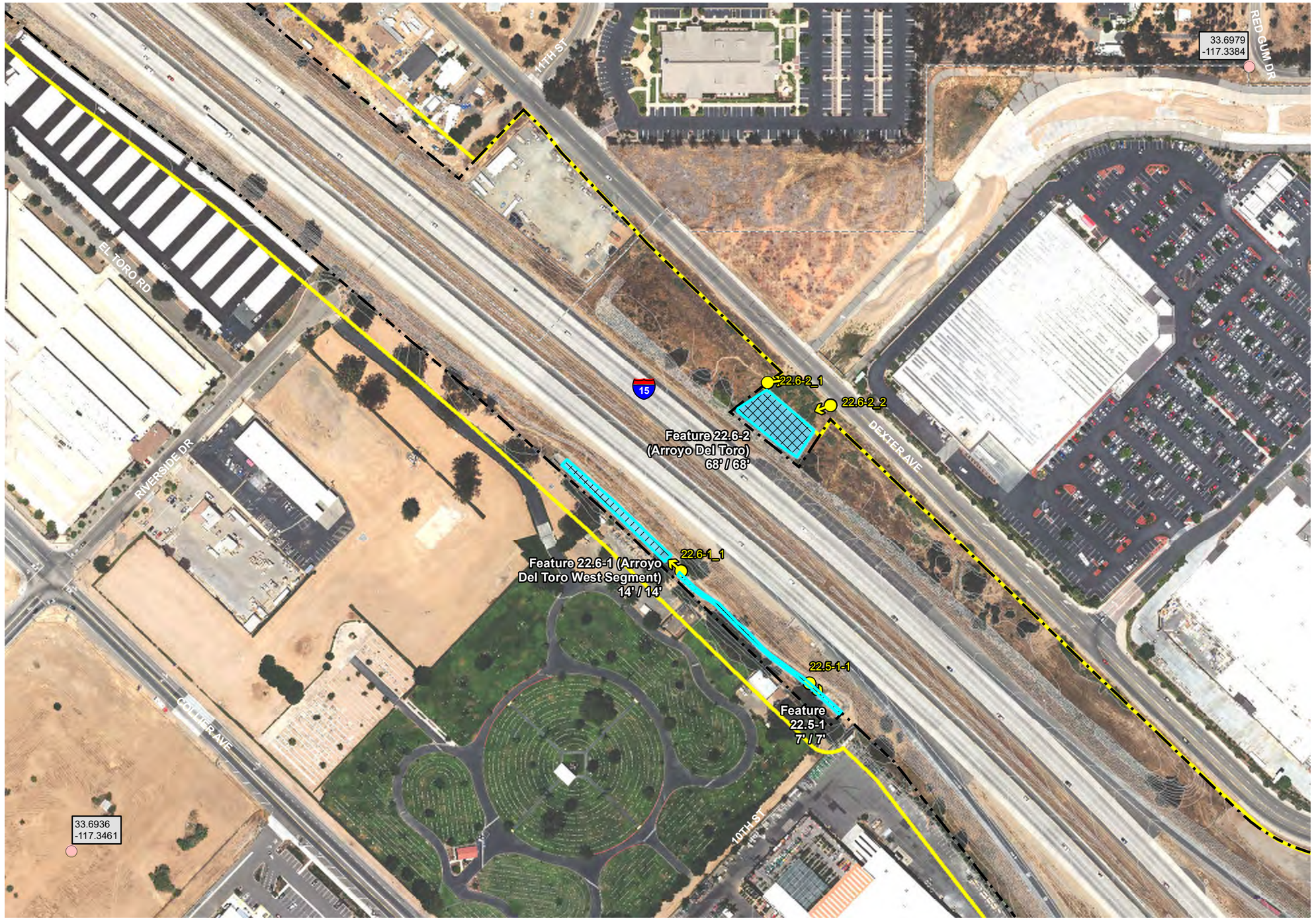
Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Sheet 3 of 40

Jurisdictional Resources Map

Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)



Legend

- Limits of Disturbance
- City/County Boundary
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- OHWM (Ephemeral)
- Streambed

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N

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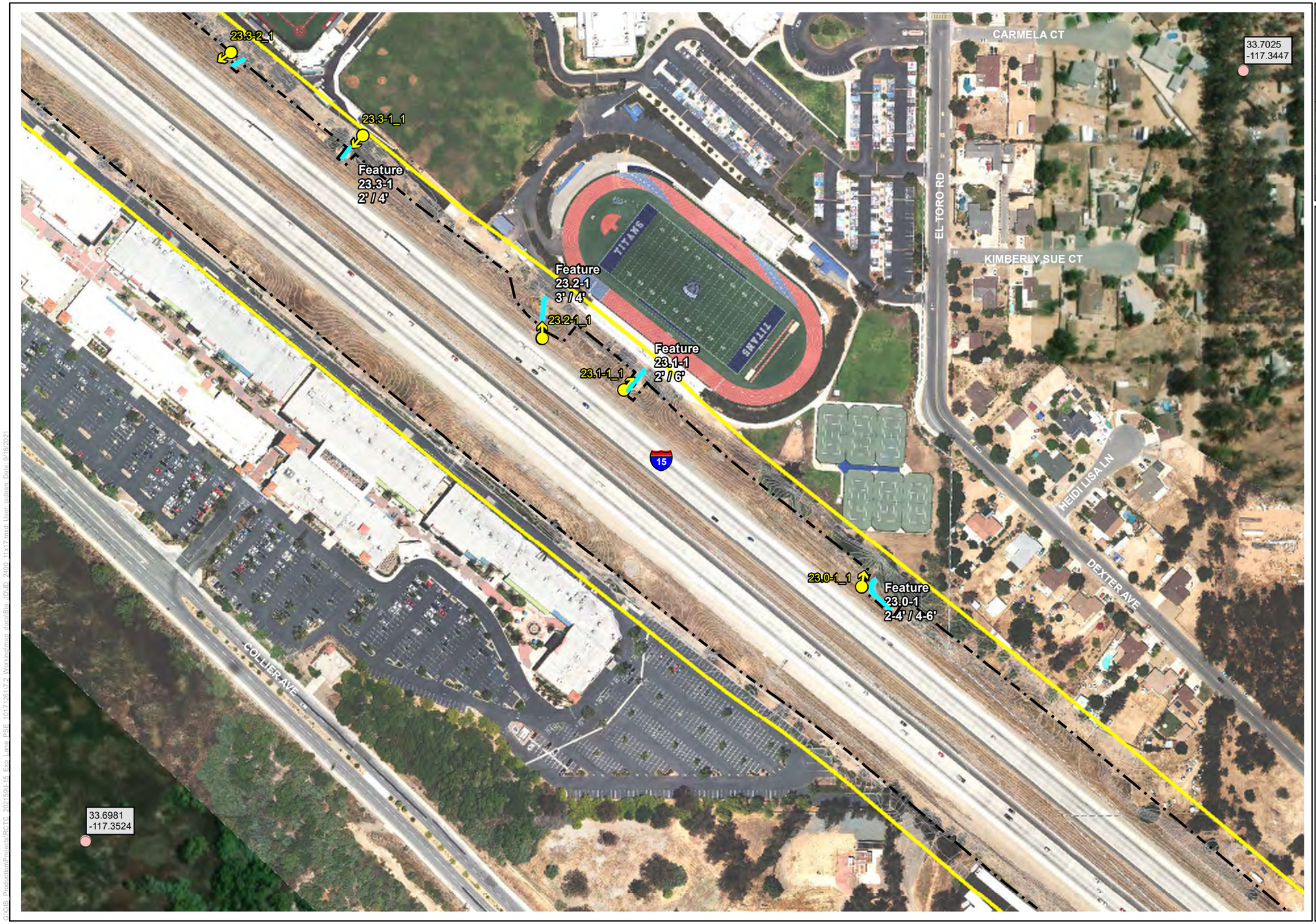
1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Jurisdictional Resources Map

Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)



Legend

- Limits of Disturbance
- City/County Boundary
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- OHWM (Ephemeral)
- Streambed

*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

N

0 100 200 Feet

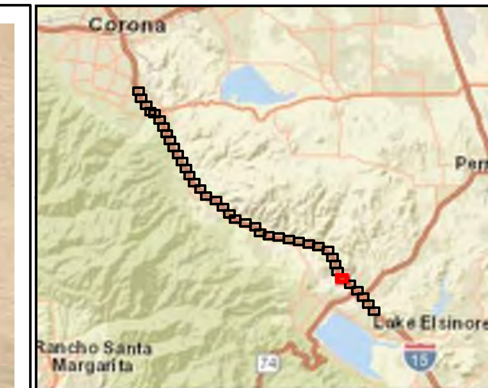
1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Sheet 5 of 40

Jurisdictional Resources Map

Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)



Legend

- Limits of Disturbance
- City/County Boundary
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- OHWM (Ephemeral)
- Streambed

*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

N

0 100 200 Feet

1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Sheet 6 of 40
Jurisdictional Resources Map
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

Legend

- Limits of Disturbance
- City/County Boundary
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- OHWM (Ephemeral)
- Streambed

*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

N

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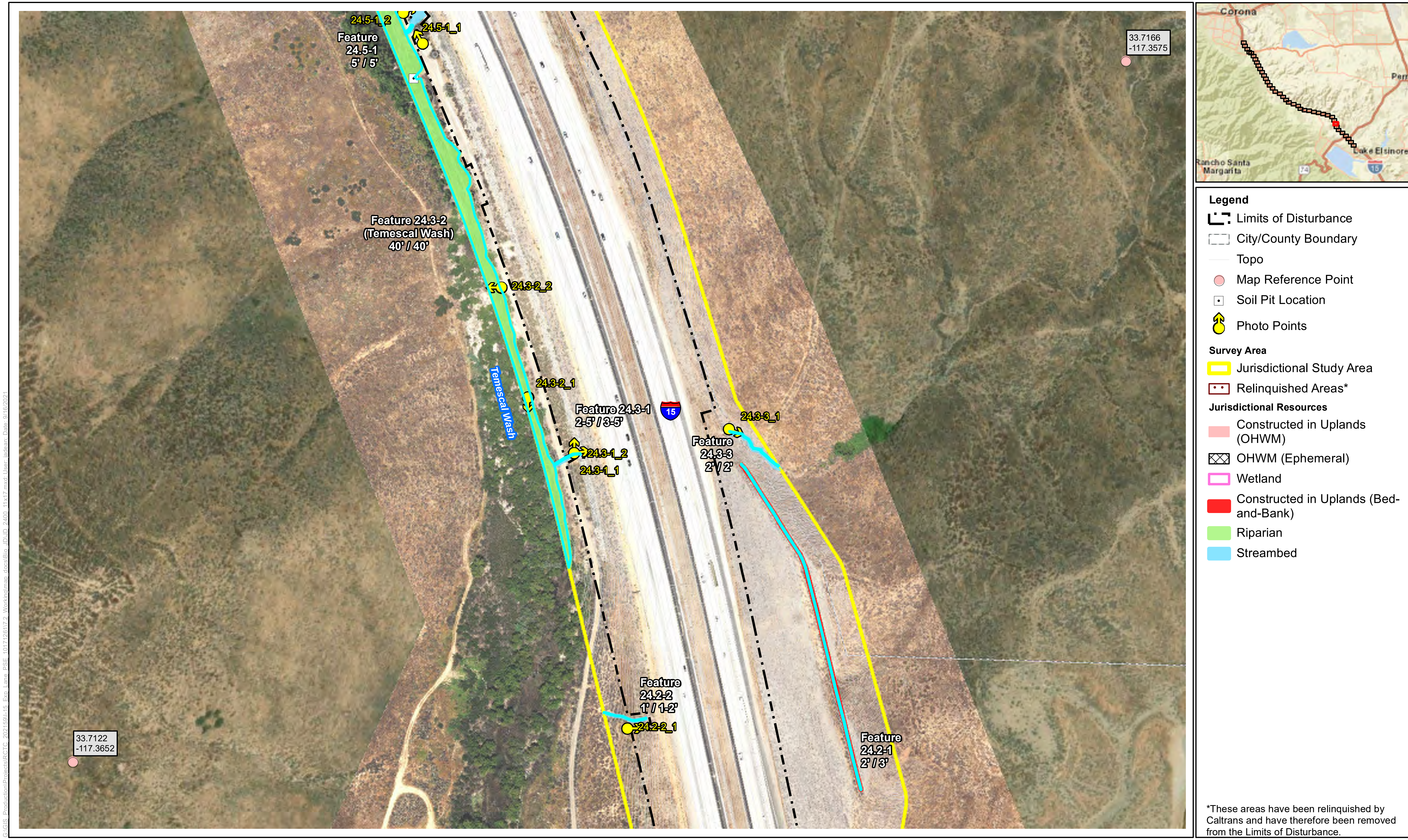
Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Jurisdictional Resources Map

Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)


Feature 24.5-1 5' / 5'
24.5-1_2
24.5-1_1
Feature 24.3-2 (Temescal Wash) 40' / 40'
24.3-2_2
24.3-2_1
Temescal Wash
Feature 24.3-1 2-5' / 3-5'
24.3-1_2
24.3-1_1
15
24.3-3_1
Feature 24.3-3 2' / 2'
Feature 24.2-2 1' / 1-2'
24.2-2_1
Feature 24.2-1 2' / 3'
33.7166 -117.3575
33.7122 -117.3652
Corona
Perris
Lake Elsinore
Rancho Santa Margarita
Legend
Limits of Disturbance
City/County Boundary
Topo
Map Reference Point
Soil Pit Location
Photo Points
Survey Area
Jurisdictional Study Area
Relinquished Areas*
Jurisdictional Resources
Constructed in Uplands (OHWM)
OHWM (Ephemeral)
Wetland
Constructed in Uplands (Bed-and-Bank)
Riparian
Streambed
*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

N

0 100 200 Feet

1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Sheet 8 of 40
Jurisdictional Resources Map
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

Legend

- Limits of Disturbance
- City/County Boundary
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- Constructed in Uplands (OHWM)
- OHWM (Ephemeral)
- Wetland
- Constructed in Uplands (Bed-and-Bank)
- Riparian
- Streambed

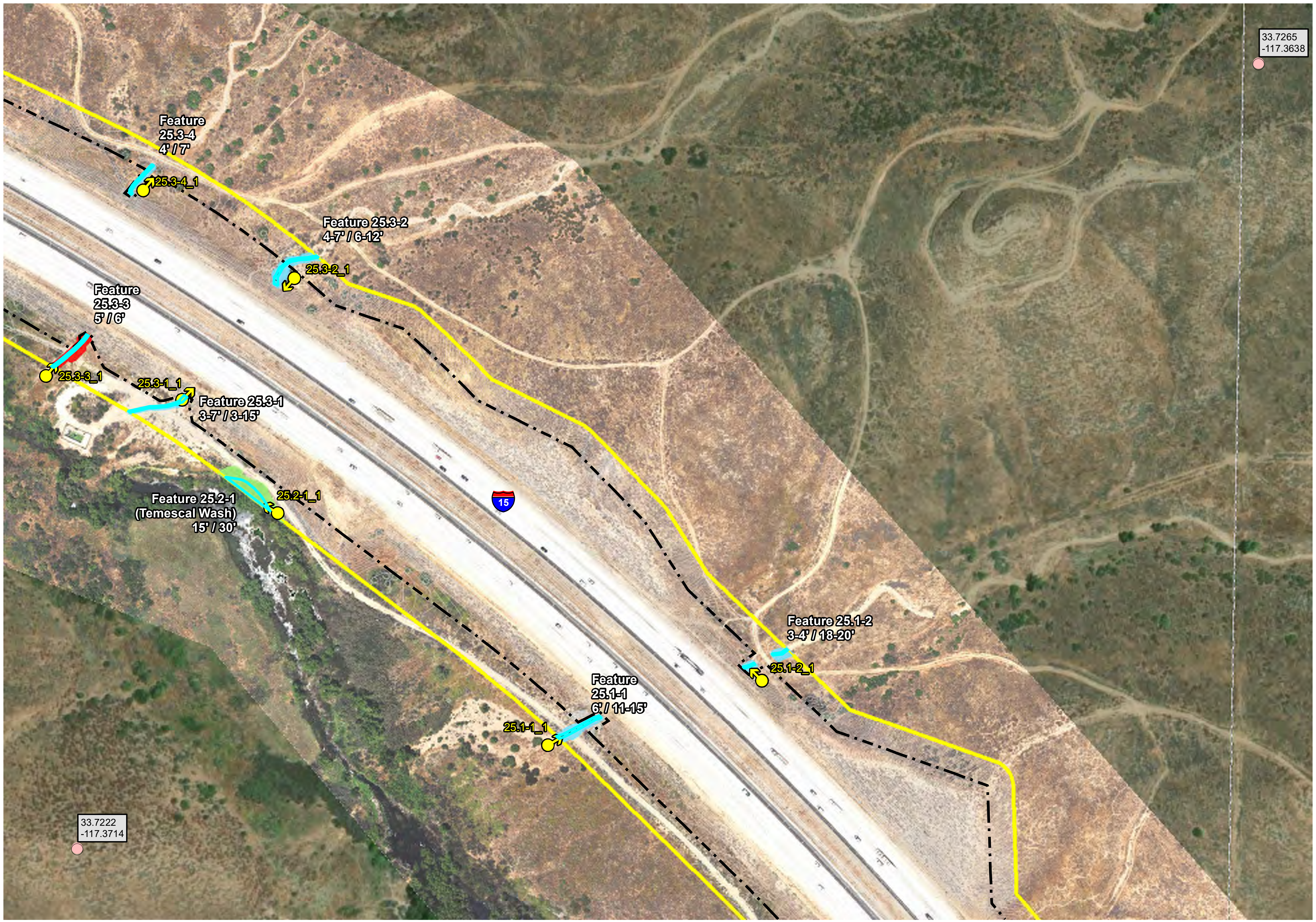
*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

N

0 100 200 Feet
1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Sheet 9 of 40
Jurisdictional Resources Map
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)



Legend

- Limits of Disturbance
- City/County Boundary
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- Constructed in Uplands (OHWM)
- OHWM (Ephemeral)
- Wetland
- Constructed in Uplands (Bed-and-Bank)
- Riparian
- Streambed

*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

N

0 100 200 Feet

1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Sheet 10 of 40

Jurisdictional Resources Map

Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

HILL TOP DR
WALKER CANYON RD
BIG CANYON DR
Feature 25.8-1 (Temescal Wash) 20' / 75'
Feature 25.6-1 4.5' / 41'
25.6-1_1
15
25.5_1
Feature 25.5-1 9-17' / 17-47'
25.5-1_2
25.5-1_3
25.3-3_1
33.729 -117.372
33.7247 -117.3797
Corona
Perris
Lake Elsinore
Rancho Santa Margarita
74
15
Legend
Limits of Disturbance
City/County Boundary
Topo
Map Reference Point
Soil Pit Location
Photo Points
Survey Area
Jurisdictional Study Area
Relinquished Areas*
Jurisdictional Resources
Constructed in Uplands (OHWM)
OHWM (Ephemeral)
Wetland
Constructed in Uplands (Bed-and-Bank)
Riparian
Streambed
*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.
N
0 100 200 Feet
1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Sheet 11 of 40
Jurisdictional Resources Map
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

Legend

- Limits of Disturbance
- City/County Boundary
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- OHWM (Intermittent)
- Wetland
- Riparian

*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

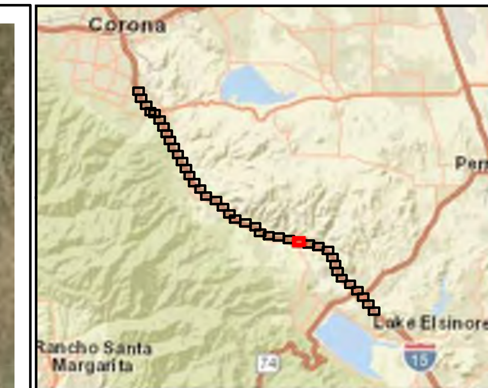
N

0 100 200 Feet

1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Sheet 12 of 40
Jurisdictional Resources Map
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)



Legend

- Limits of Disturbance
- City/County Boundary
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- OHWM (Ephemeral)
- Wetland
- Riparian
- Streambed

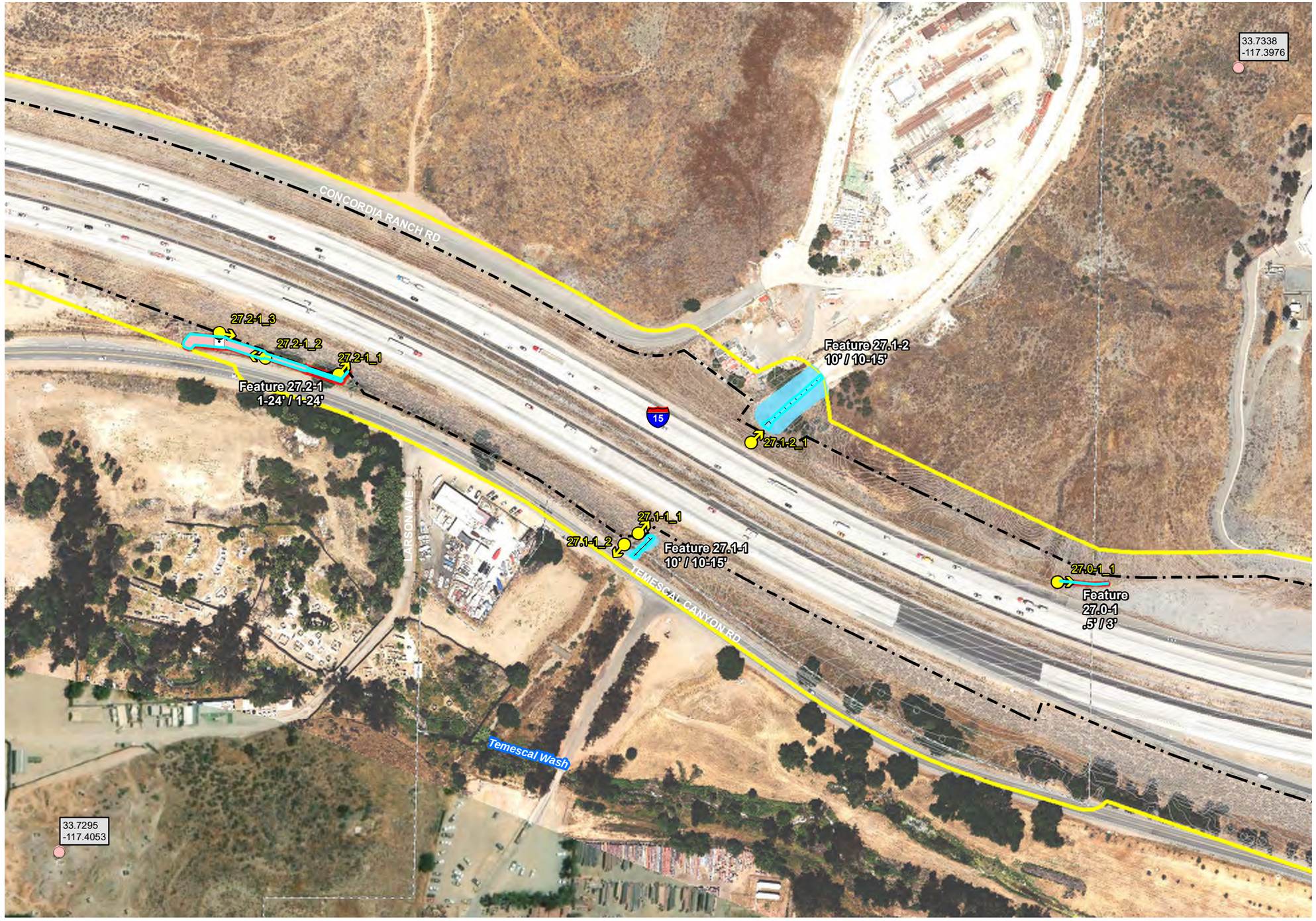
*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

N

0 100 200 Feet
1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Sheet 13 of 40
Jurisdictional Resources Map
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)



Legend

- Limits of Disturbance
- City/County Boundary
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- Constructed in Uplands (OHWM)
- OHWM (Ephemeral)
- Constructed in Uplands (Bed-and-Bank)
- Streambed

*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

N

0 100 200 Feet

1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Jurisdictional Resources Map

Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

Legend

- Limits of Disturbance
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- Constructed in Uplands (OHWM)
- OHWM (Ephemeral)
- Wetland
- Constructed in Uplands (Bed-and-Bank)
- Riparian
- Streambed

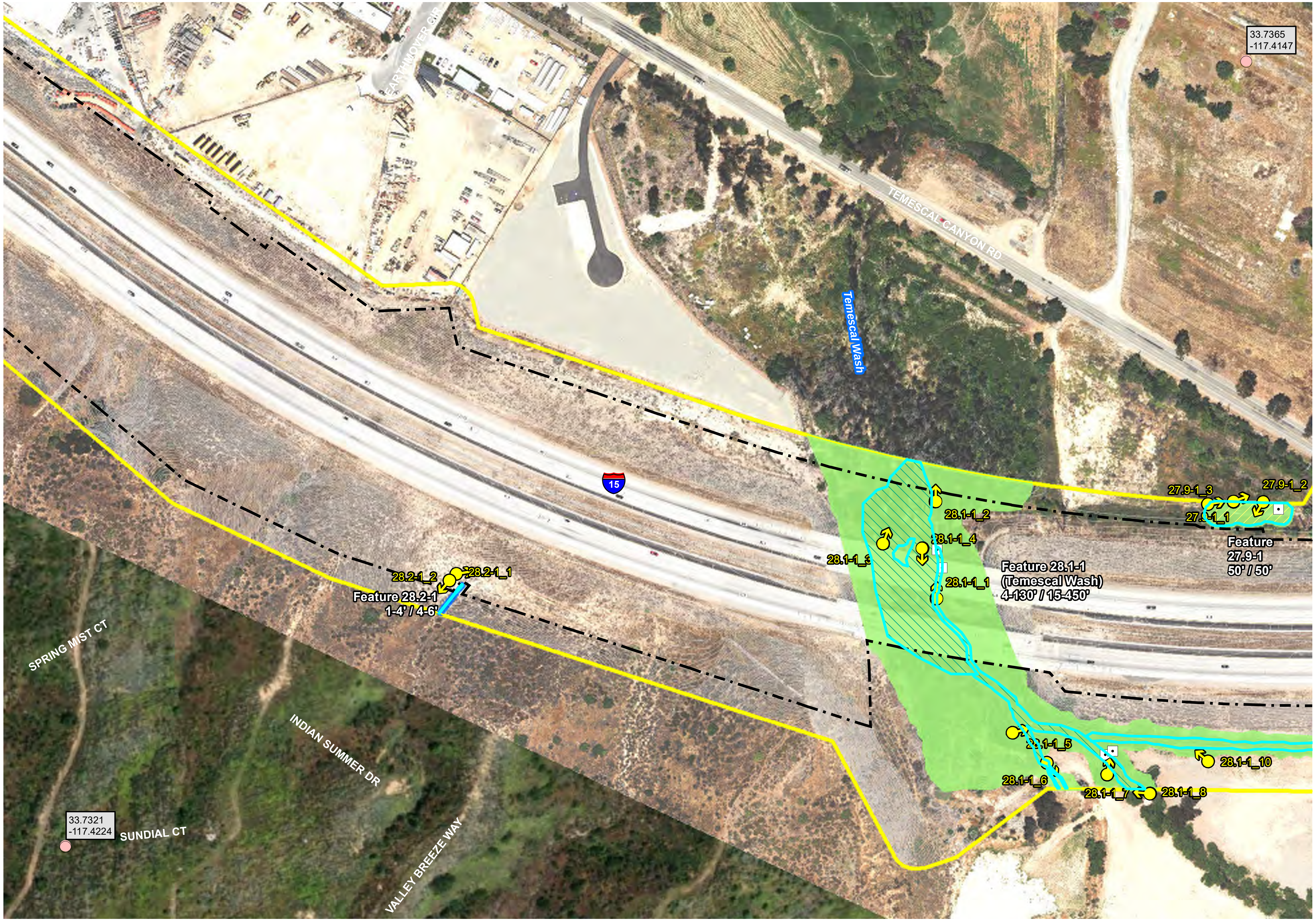
*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

N

0 100 200 Feet
1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Sheet 15 of 40
Jurisdictional Resources Map
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)



Legend

- Limits of Disturbance
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- OHWM (Isolated)
- OHWM (Perennial)
- Wetland
- Riparian
- Streambed (Isolated)

*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

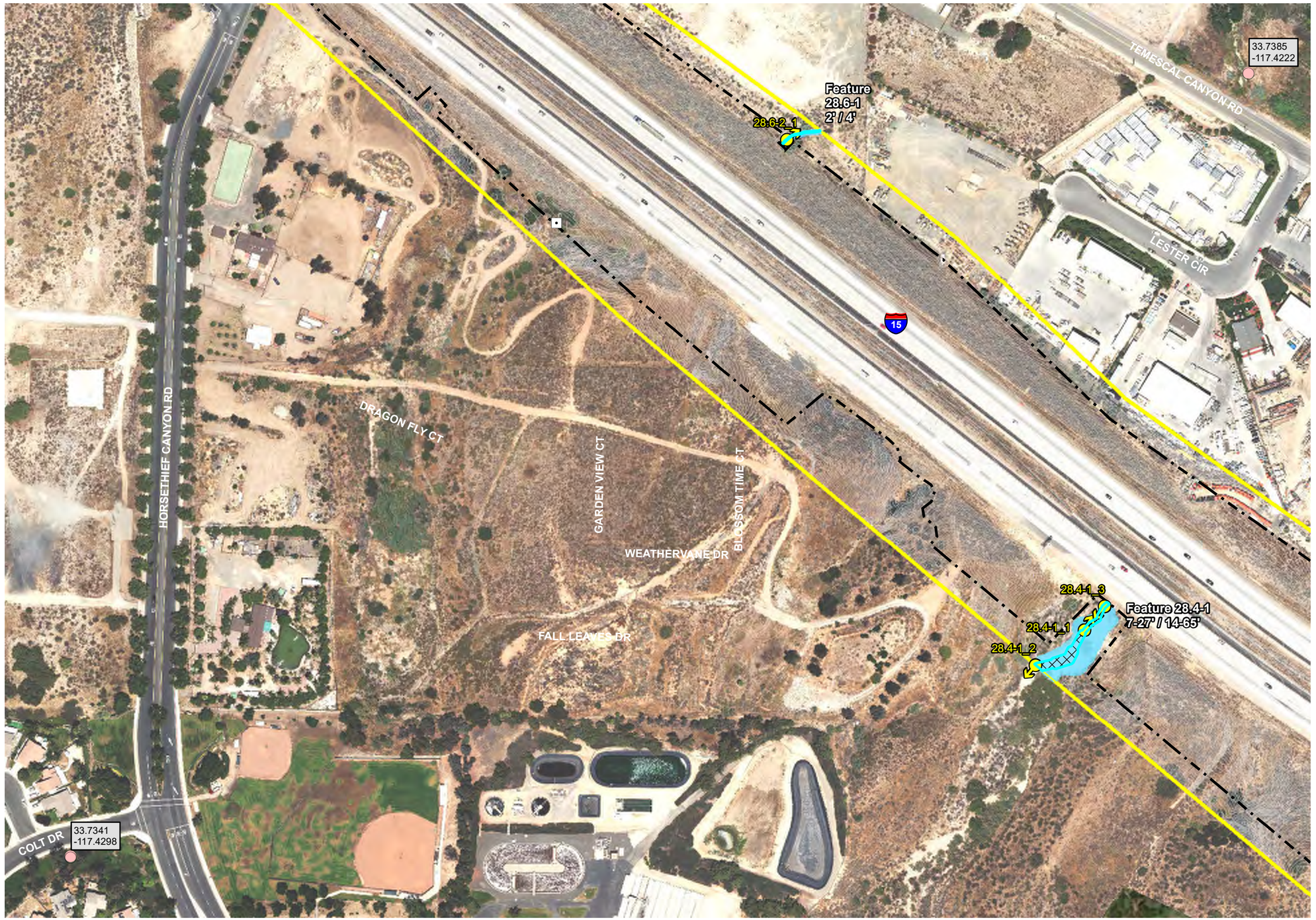
N

0 100 200 Feet

1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Sheet 16 of 40
Jurisdictional Resources Map
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)



Legend

- Limits of Disturbance
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- OHWM (Ephemeral)
- Streambed

*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

N

0 100 200 Feet

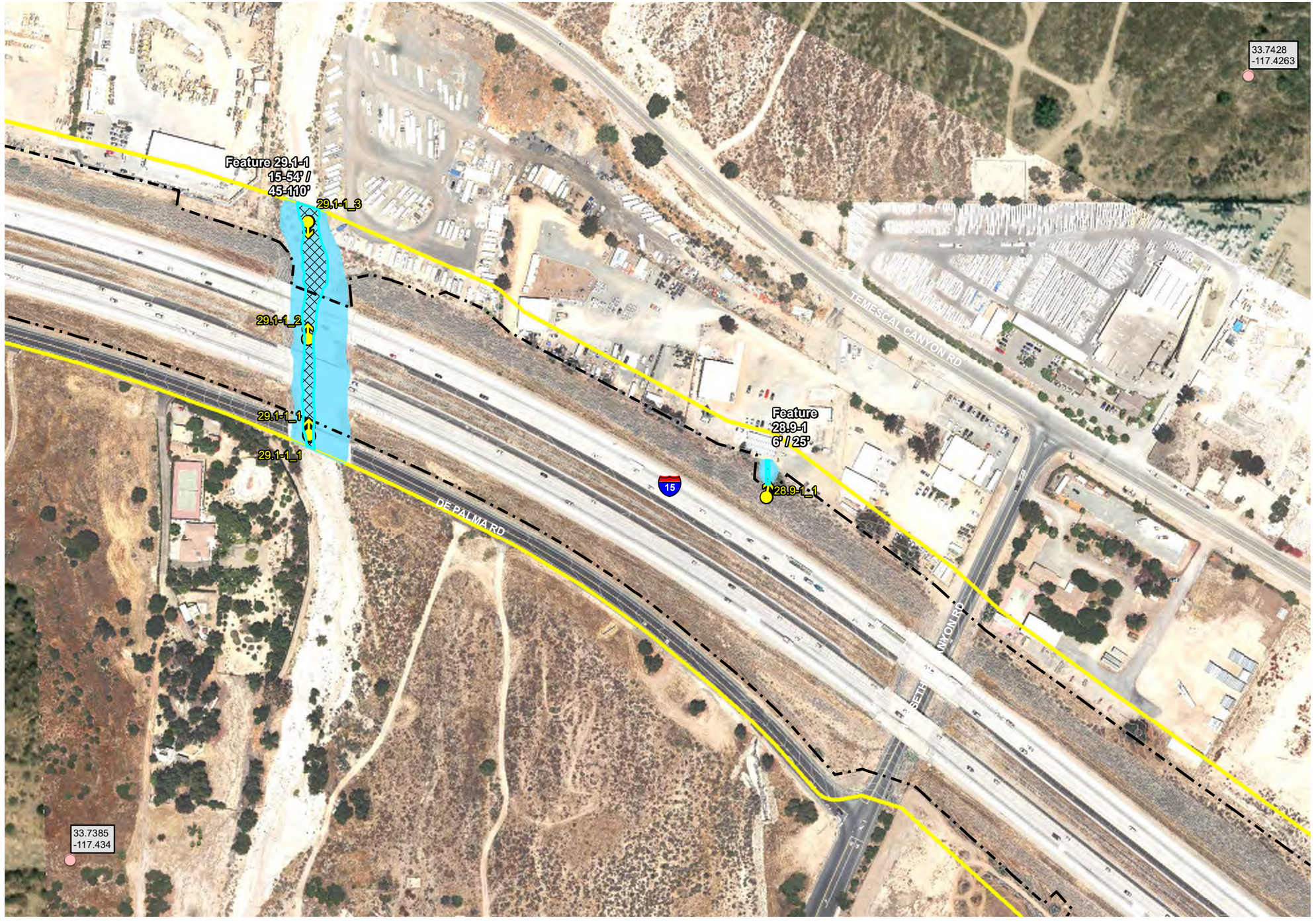
1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Sheet 17 of 40

Jurisdictional Resources Map

Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)



Legend

- Limits of Disturbance
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- OHWM (Ephemeral)
- Streambed

*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

N

0 100 200 Feet

1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Sheet 18 of 40
Jurisdictional Resources Map
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

Legend

- Limits of Disturbance
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- OHWM (Ephemeral)
- Streambed

*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

N

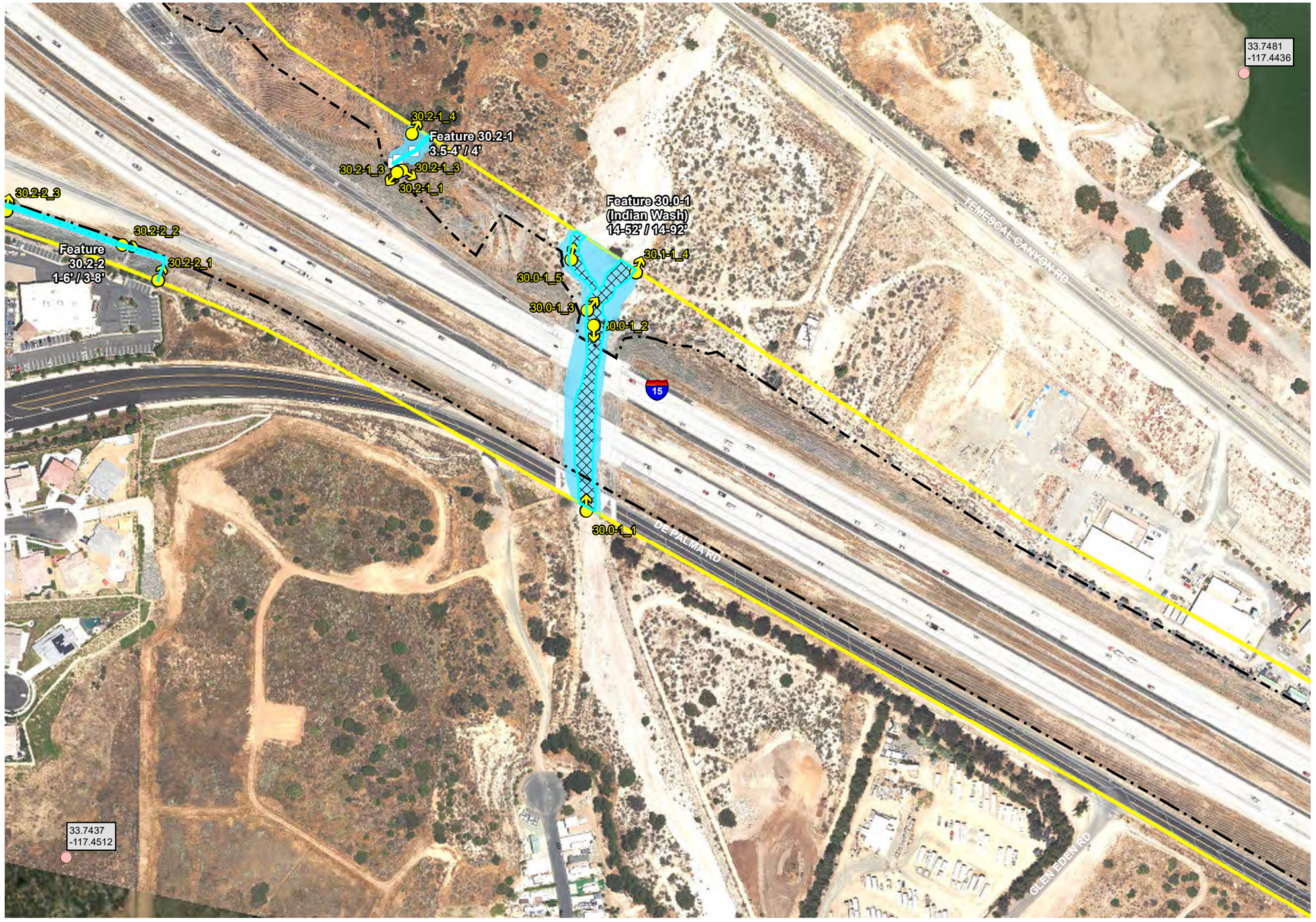
0 100 200 Feet
1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Sheet 19 of 40

Jurisdictional Resources Map

Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)



Legend

- Limits of Disturbance
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- OHWM (Ephemeral)
- Streambed

*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

N

0 100 200 Feet

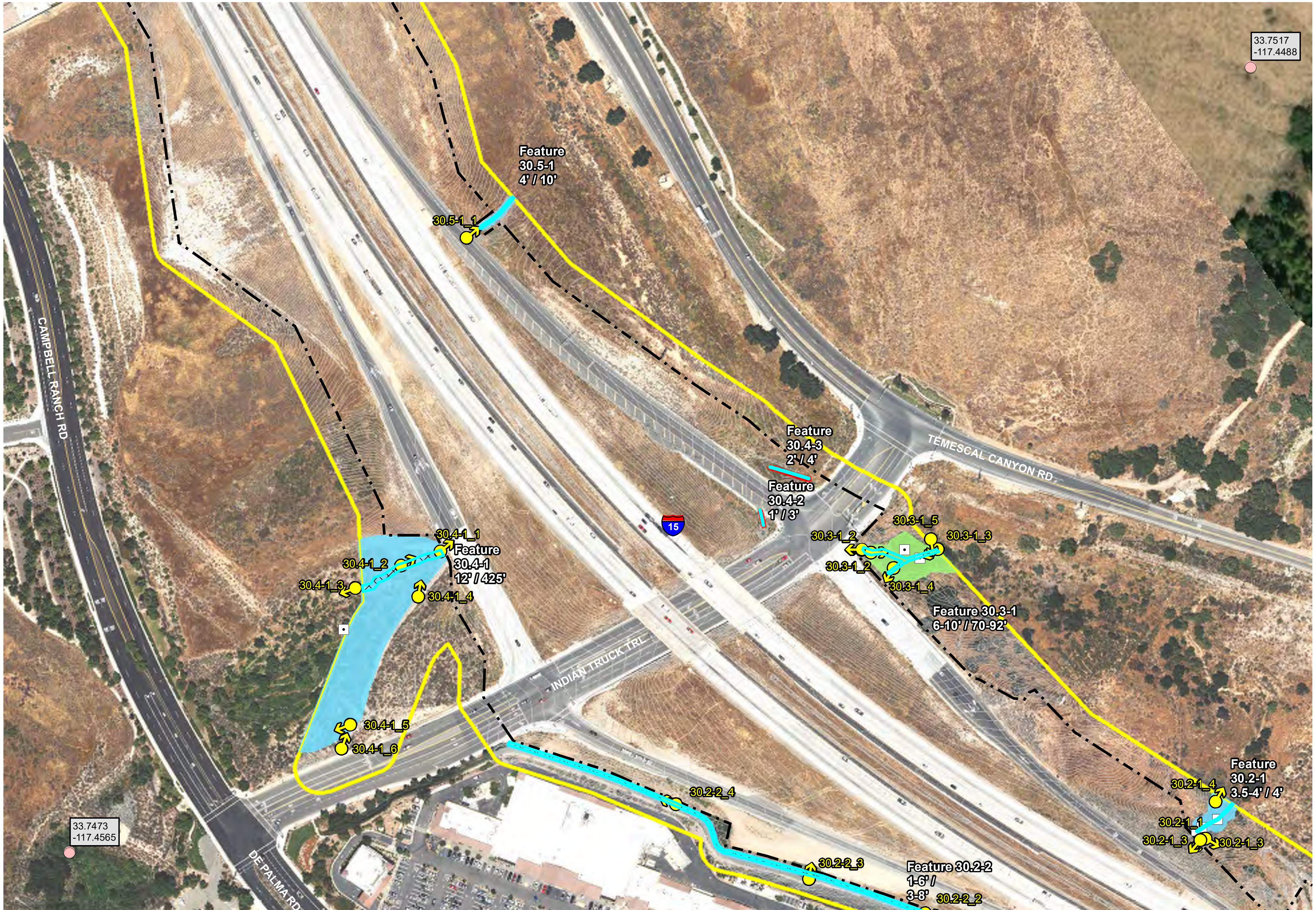
1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Sheet 20 of 40

Jurisdictional Resources Map

Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)



Legend

- Limits of Disturbance
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- Constructed in Uplands (OHWM)
- OHWM (Ephemeral)
- Wetland
- Constructed in Uplands (Bed-and-Bank)
- Riparian
- Streambed

*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

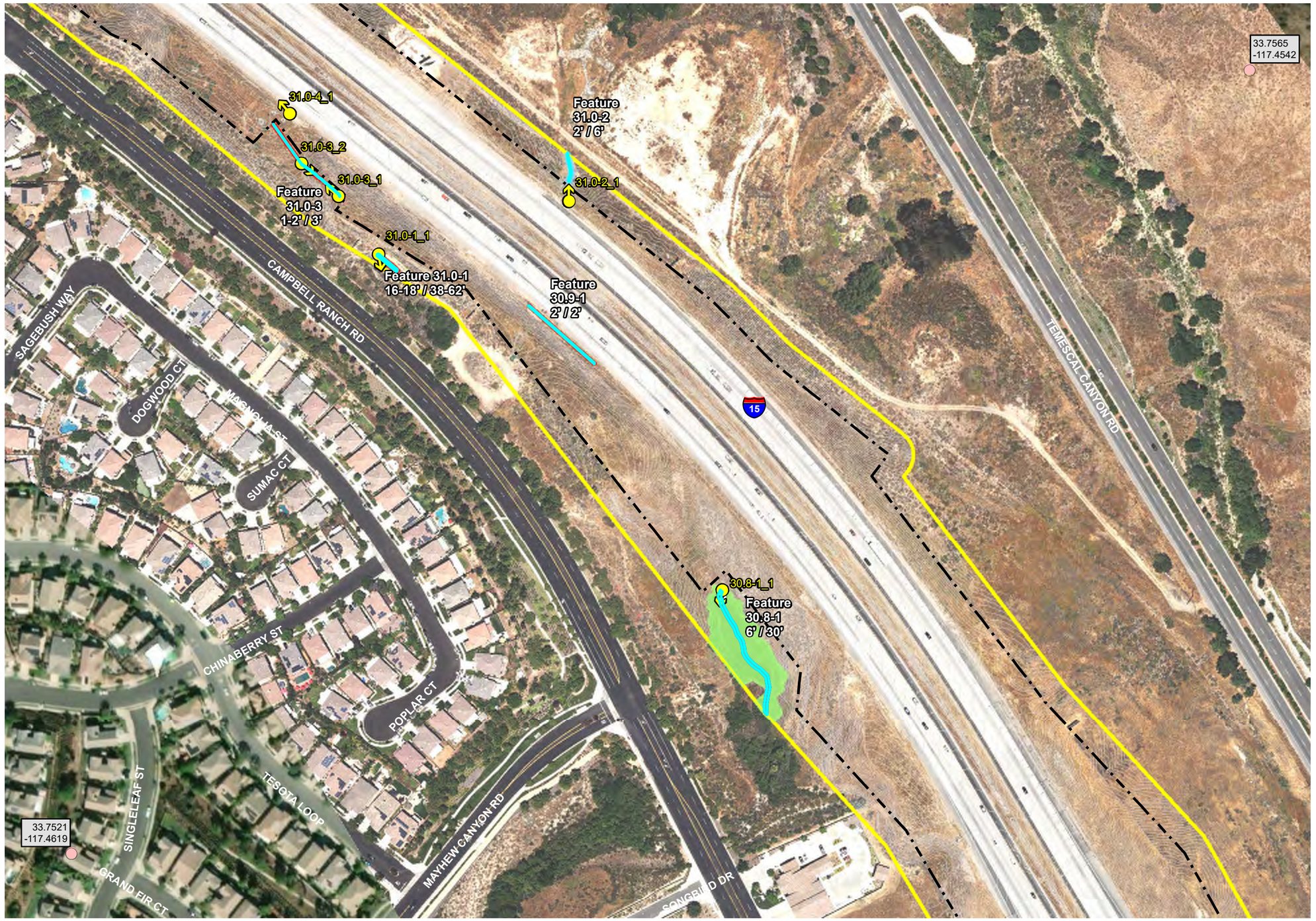
N

0 100 200 Feet

1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Sheet 21 of 40
Jurisdictional Resources Map
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)



Legend

- Limits of Disturbance
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- Constructed in Uplands (OHWM)
- OHWM (Ephemeral)
- Wetland (Isolated)
- Constructed in Uplands (Bed-and-Bank)
- Riparian
- Streambed

*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

N

0 100 200 Feet

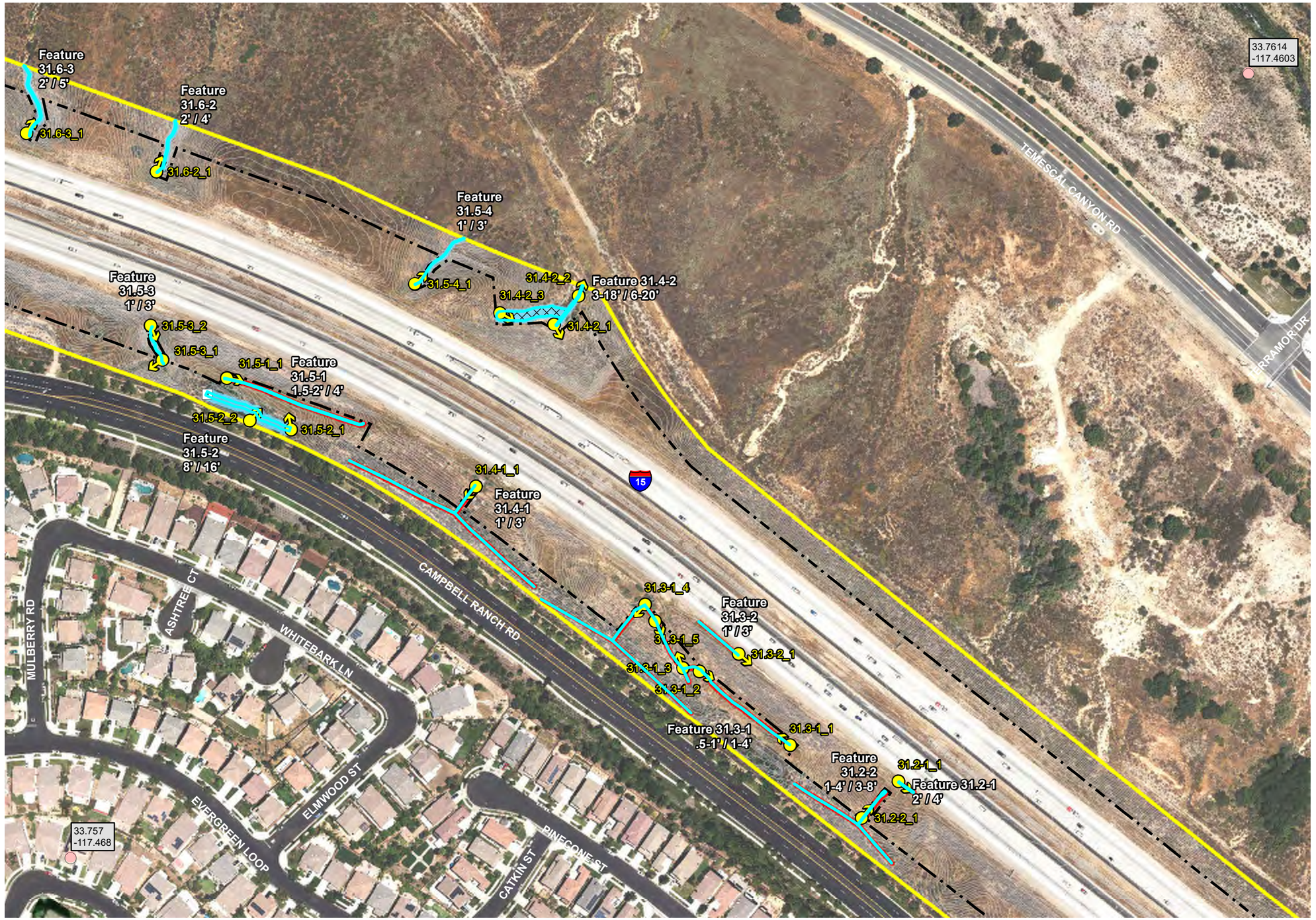
1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Sheet 22 of 40

Jurisdictional Resources Map

Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)



Legend

- Limits of Disturbance
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- Constructed in Uplands (OHWM)
- OHWM (Ephemeral)
- Wetland
- Constructed in Uplands (Bed-and-Bank)
- Streambed

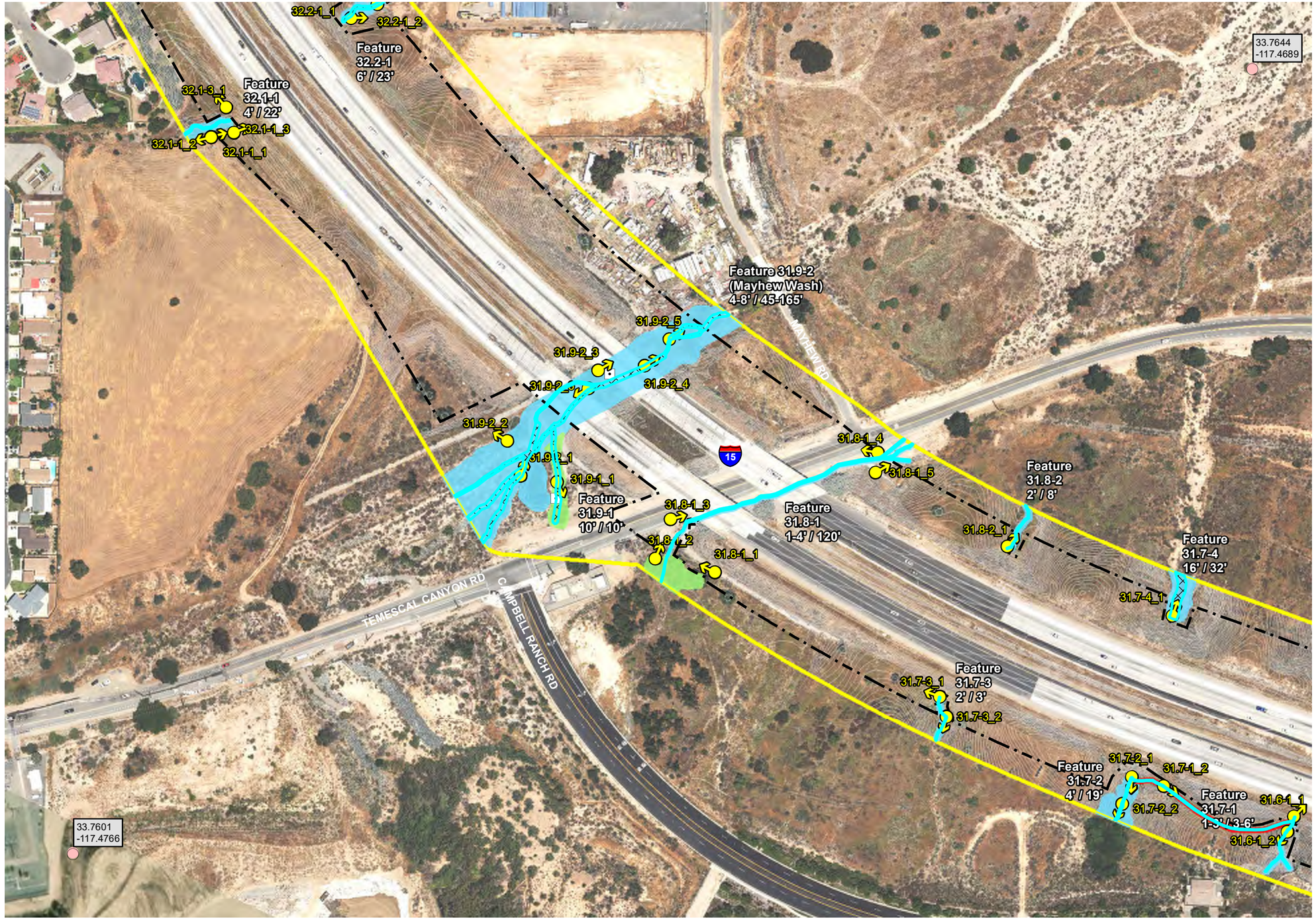
*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

N

0 100 200 Feet
1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Jurisdictional Resources Map
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)



Legend

- Limits of Disturbance
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- Constructed in Uplands (OHWM)
- OHWM (Ephemeral)
- Constructed in Uplands (Bed-and-Bank)
- Riparian
- Streambed

*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

N

0 100 200 Feet

1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Sheet 24 of 40

Jurisdictional Resources Map

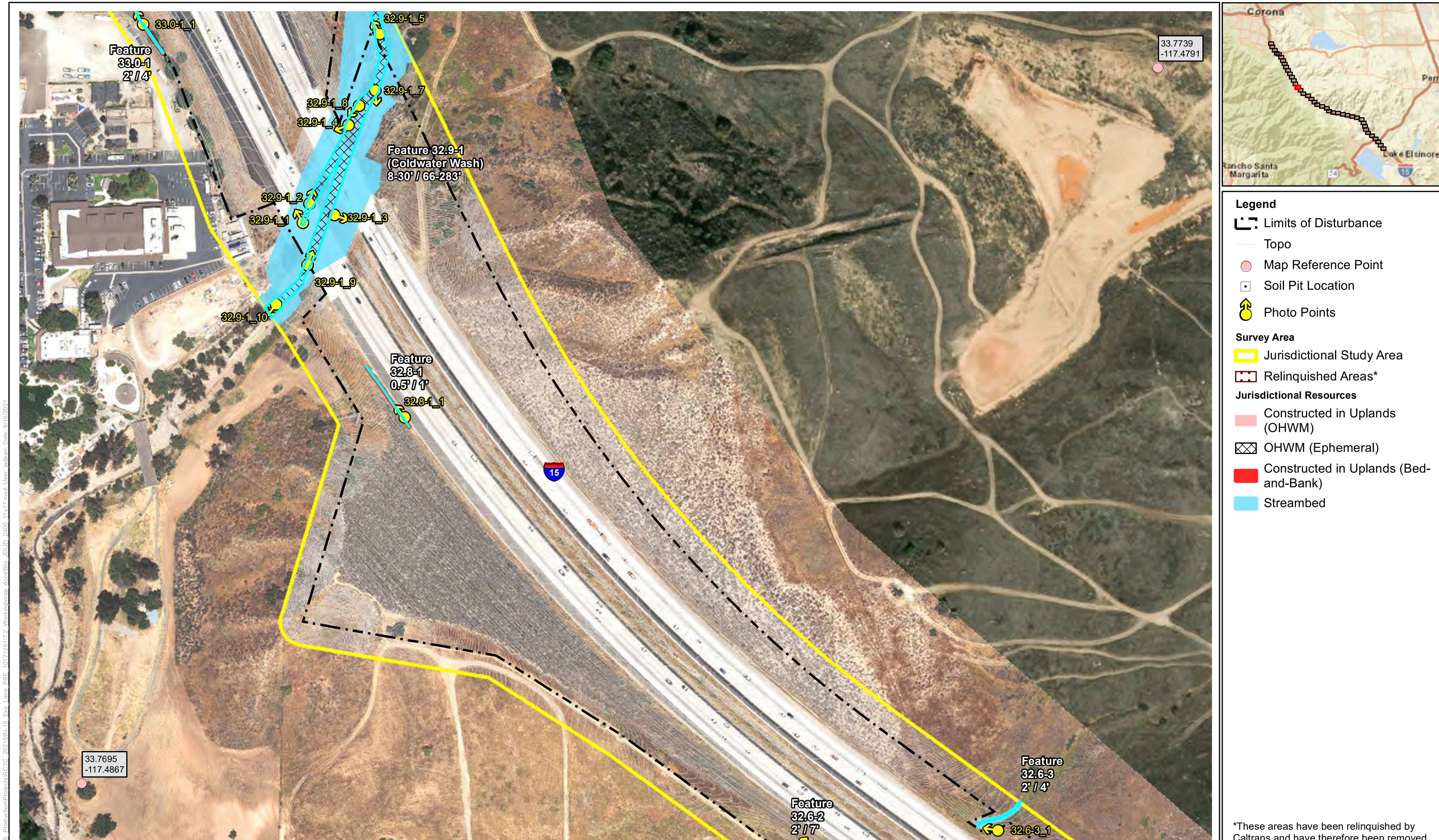
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)


Feature
32.6-3
2' / 4'
32.6-3_1
Feature
32.6-2
2' / 7'
32.6-2_1
Feature
32.5-1
1' / 3'
32.5-1_2
32.5-1_1
Feature
32.6-1
2-3' / 4-6'
32.6-1_1
33.7694
-117.474
Feature
32.3-2
4' / 6'
32.3-2_1
Feature
32.3-1
1' / 5'
32.3-1_1
15
ICEFIELD CT
KENOSHA CT
WHITECROWN CIR
ORANGE GROVE PL
MOJESKA SUMMIT RD
THUNDER CT
BALDY CT
GLEN IVY RD
33.765
-117.4817
Feature
32.1-1
6' / 23'
Corona
Perris
Rancho Santa Margarita
Lake Elsinore
15
Legend
Limits of Disturbance
Topo
Map Reference Point
Soil Pit Location
Photo Points
Survey Area
Jurisdictional Study Area
Relinquished Areas*
Jurisdictional Resources
Constructed in Uplands (OHWM)
OHWM (Ephemeral)
OHWM (Intermittent)
Constructed in Uplands (Bed-and-Bank)
Streambed
*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.
N
0 100 200
Feet
1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Jurisdictional Resources Map

Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)



Legend

- Limits of Disturbance
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- Constructed in Uplands (OHWM)
- OHWM (Ephemeral)
- Constructed in Uplands (Bed-and-Bank)
- Streambed

*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

N

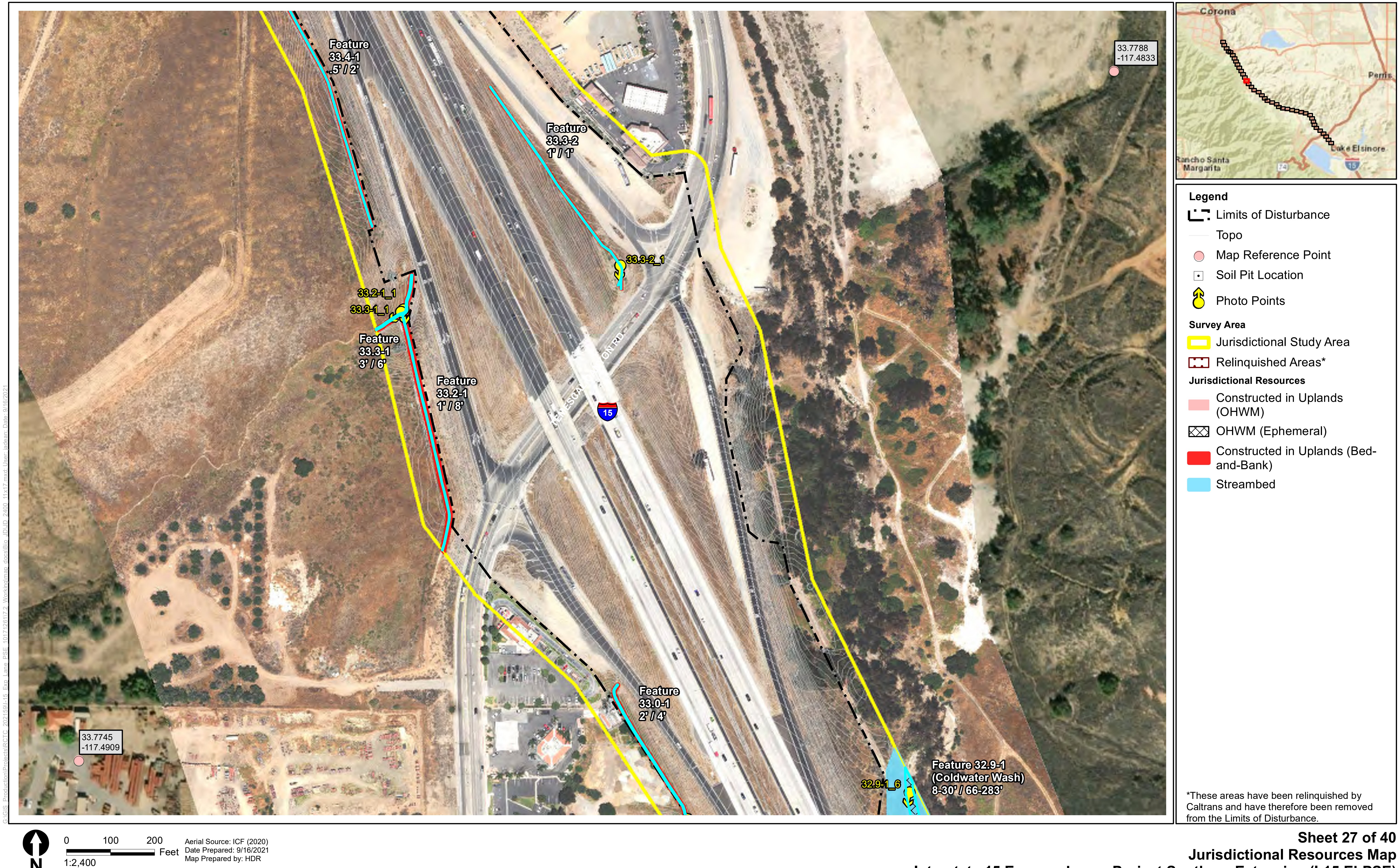
0 100 200 Feet

1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

G:\GIS_Production\Projects\RCTC_2021\5\I-15_Exp_Lane_PSE_10171261\7.2_Work\Map_docs\Bio_JD\JD_2400_11x17.mxd User: ladean Date: 9/16/2021

Sheet 26 of 40
Jurisdictional Resources Map
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)



Feature
33.4-1
.5' / 2'
Feature
33.3-2
1' / 1'
33.3-2_1
33.2-1_1
33.3-1_1
Feature
33.3-1
3' / 6'
Feature
33.2-1
1' / 8'
15
Feature
33.0-1
2' / 4'
Feature 32.9-1
(Coldwater Wash)
8-30' / 66-283'
32.9-1_6
33.7788
-117.4833
33.7745
-117.4909
Corona
Perris
Lake Elsinore
Rancho Santa
Margarita
Legend
Limits of Disturbance
Topo
Map Reference Point
Soil Pit Location
Photo Points
Survey Area
Jurisdictional Study Area
Relinquished Areas*
Jurisdictional Resources
Constructed in Uplands (OHWM)
OHWM (Ephemeral)
Constructed in Uplands (Bed-and-Bank)
Streambed
*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.
N
0 100 200
Feet
1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Jurisdictional Resources Map

Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

Legend

- Limits of Disturbance
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- Constructed in Uplands (OHWM)
- OHWM (Ephemeral)
- OHWM (Intermittent)
- Constructed in Uplands (Bed-and-Bank)
- Riparian
- Streambed

*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

N

0 100 200 Feet

1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Jurisdictional Resources Map

Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

Legend

- Limits of Disturbance
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- Constructed in Uplands (OHWM)
- OHWM (Ephemeral)
- OHWM (Intermittent)
- Wetland
- Constructed in Uplands (Bed-and-Bank)
- Riparian
- Streambed

*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

N

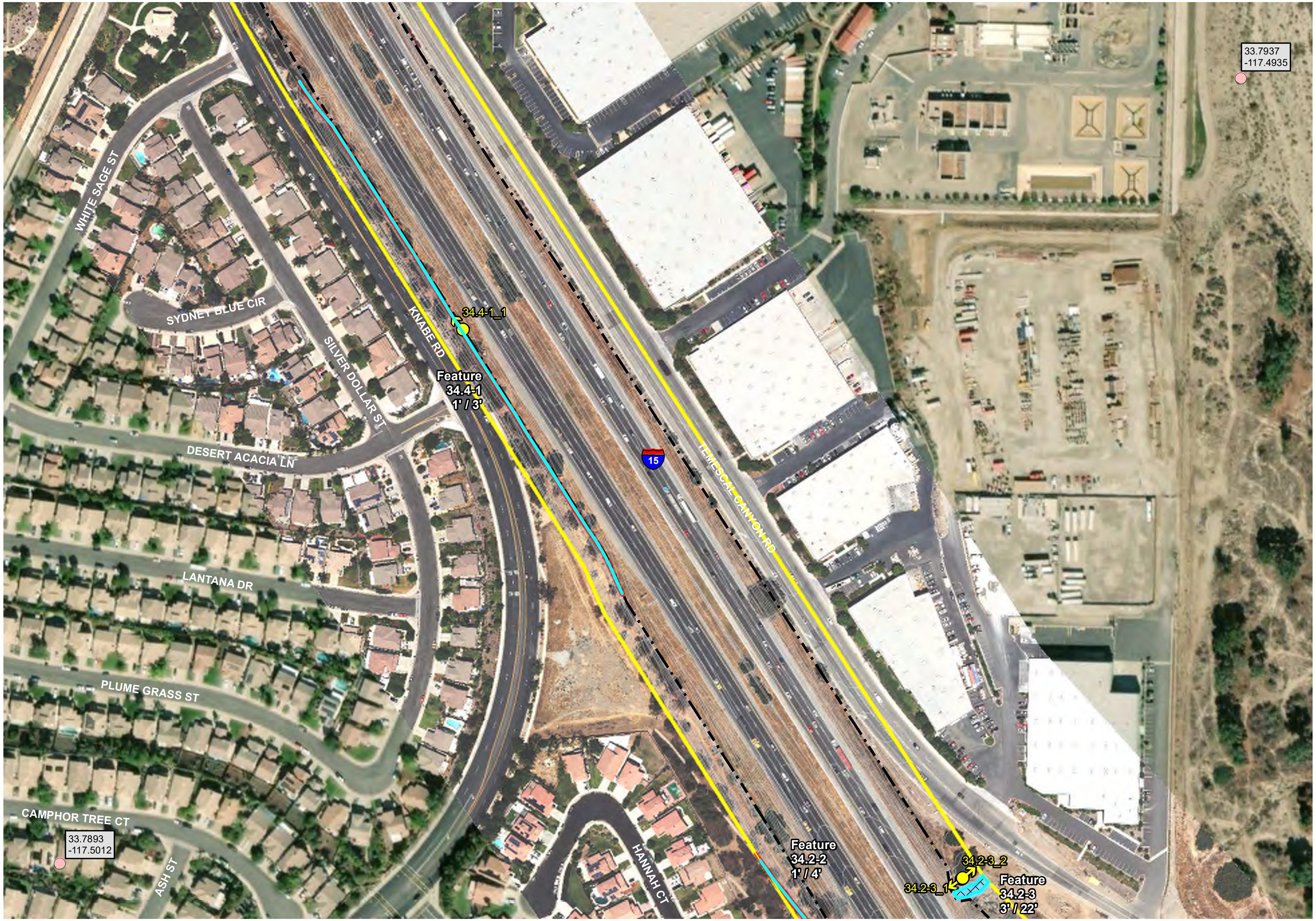
0 100 200 Feet

1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Jurisdictional Resources Map

Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)



Legend

- Limits of Disturbance
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- Constructed in Uplands (OHWM)
- OHWM (Ephemeral)
- Constructed in Uplands (Bed-and-Bank)
- Streambed

*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

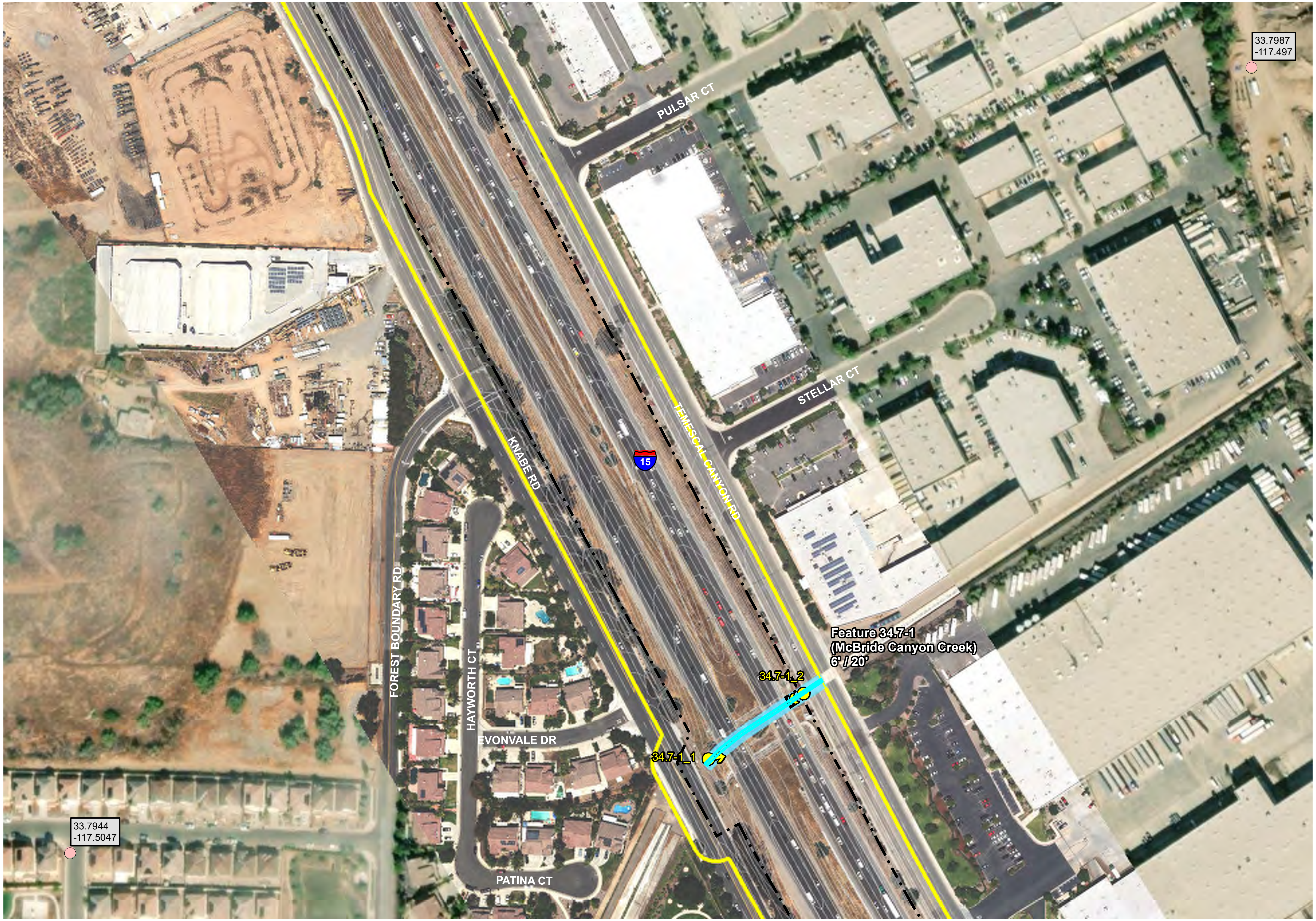
N

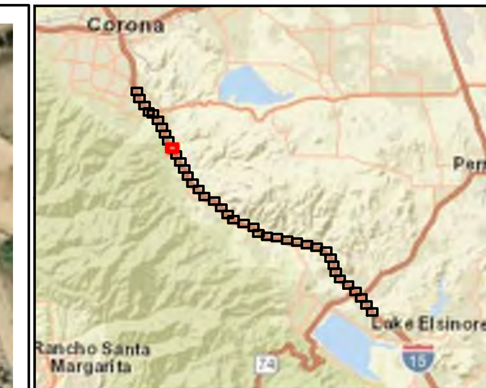
0 100 200 Feet

1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Sheet 30 of 40
Jurisdictional Resources Map
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)





Legend

- Limits of Disturbance
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- OHWM (Perennial)
- Streambed

*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

N

0 100 200 Feet

1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Sheet 31 of 40
Jurisdictional Resources Map
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

Legend

- Limits of Disturbance
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

N

0 100 200 Feet

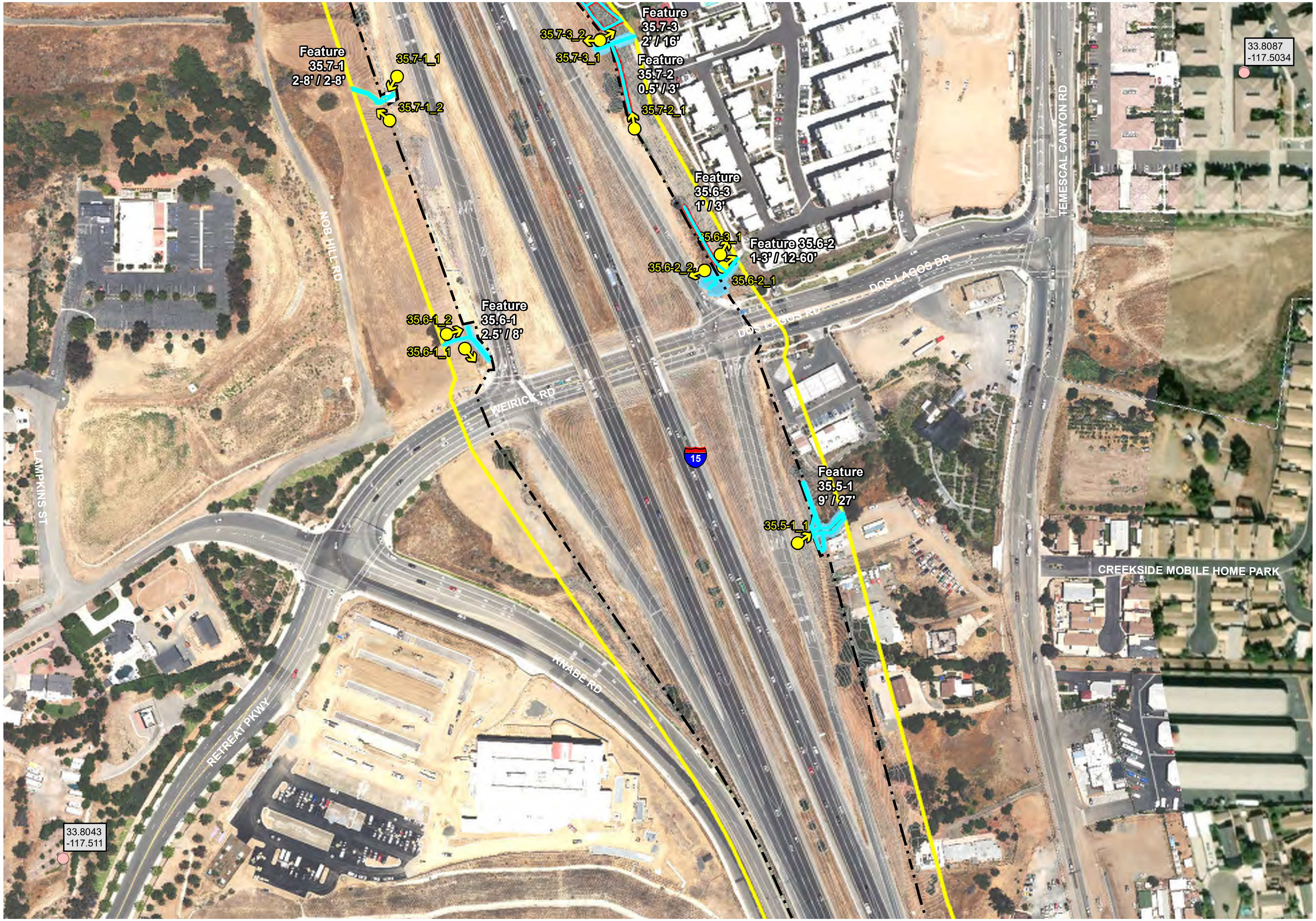
1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Sheet 32 of 40

Jurisdictional Resources Map

Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)



Legend

- Limits of Disturbance
- City/County Boundary
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- Constructed in Uplands (OHWM)
- OHWM (Ephemeral)
- OHWM (Intermittent)
- Wetland
- Constructed in Uplands (Bed-and-Bank)
- Riparian
- Streambed

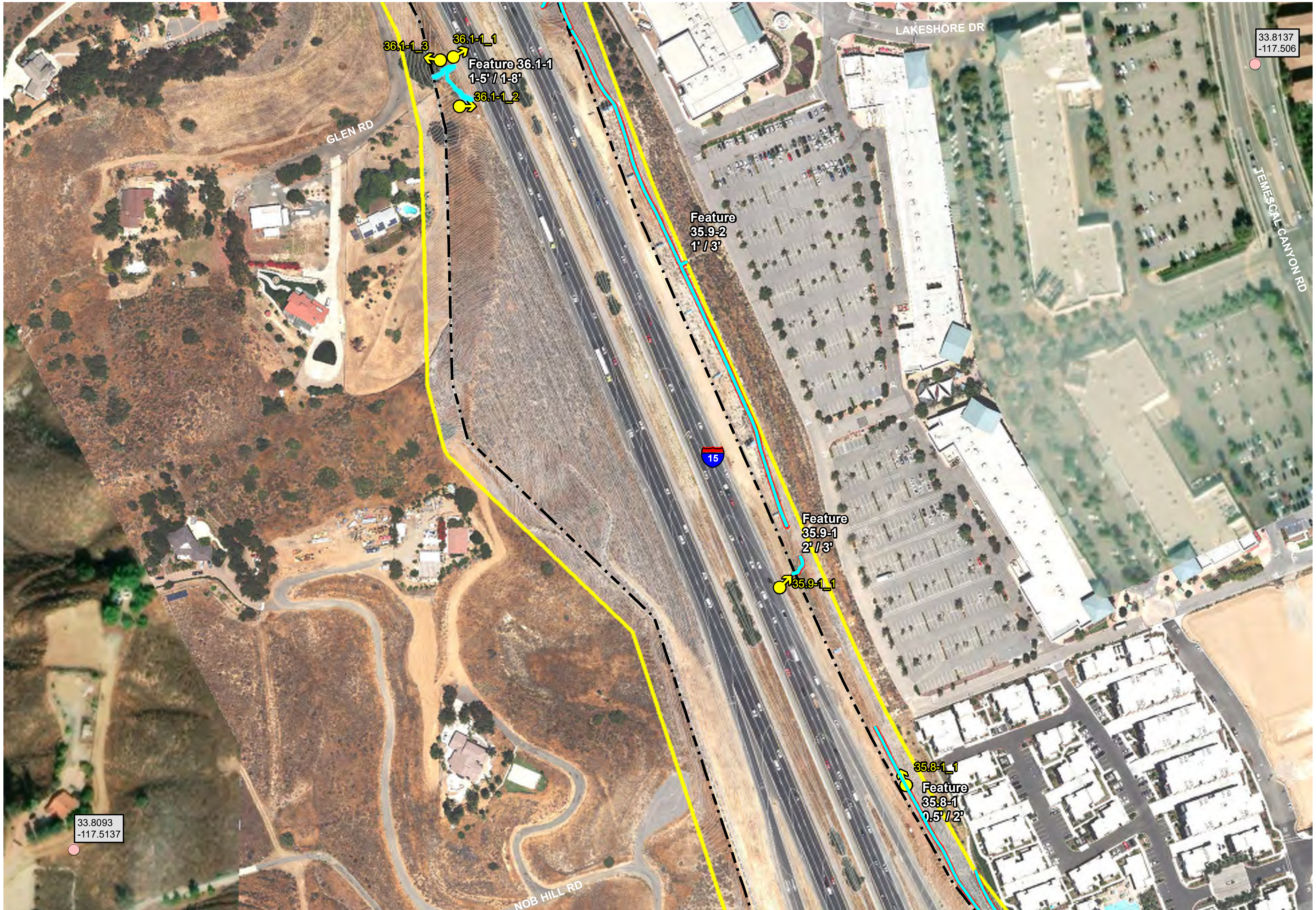
*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

N

0 100 200 Feet
1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Sheet 33 of 40
Jurisdictional Resources Map
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)



Legend

- Limits of Disturbance
- City/County Boundary
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- Constructed in Uplands (OHWM)
- OHWM (Ephemeral)
- Constructed in Uplands (Bed-and-Bank)
- Streambed

*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

N

0 100 200 Feet

1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Sheet 34 of 40

Jurisdictional Resources Map

Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

Legend

- Limits of Disturbance
- City/County Boundary
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- Constructed in Uplands (OHWM)
- OHWM (Ephemeral)
- Constructed in Uplands (Bed-and-Bank)
- Streambed

*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

N

0 100 200 Feet
1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Jurisdictional Resources Map
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

Legend

- Limits of Disturbance
- City/County Boundary
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- Constructed in Uplands (OHWM)
- OHWM (Ephemeral)
- Constructed in Uplands (Bed-and-Bank)
- Streambed

*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

N

0 100 200 Feet

1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Jurisdictional Resources Map

Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

Legend

- Limits of Disturbance
- City/County Boundary
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- Constructed in Uplands (OHWM)
- Constructed in Uplands (Bed-and-Bank)

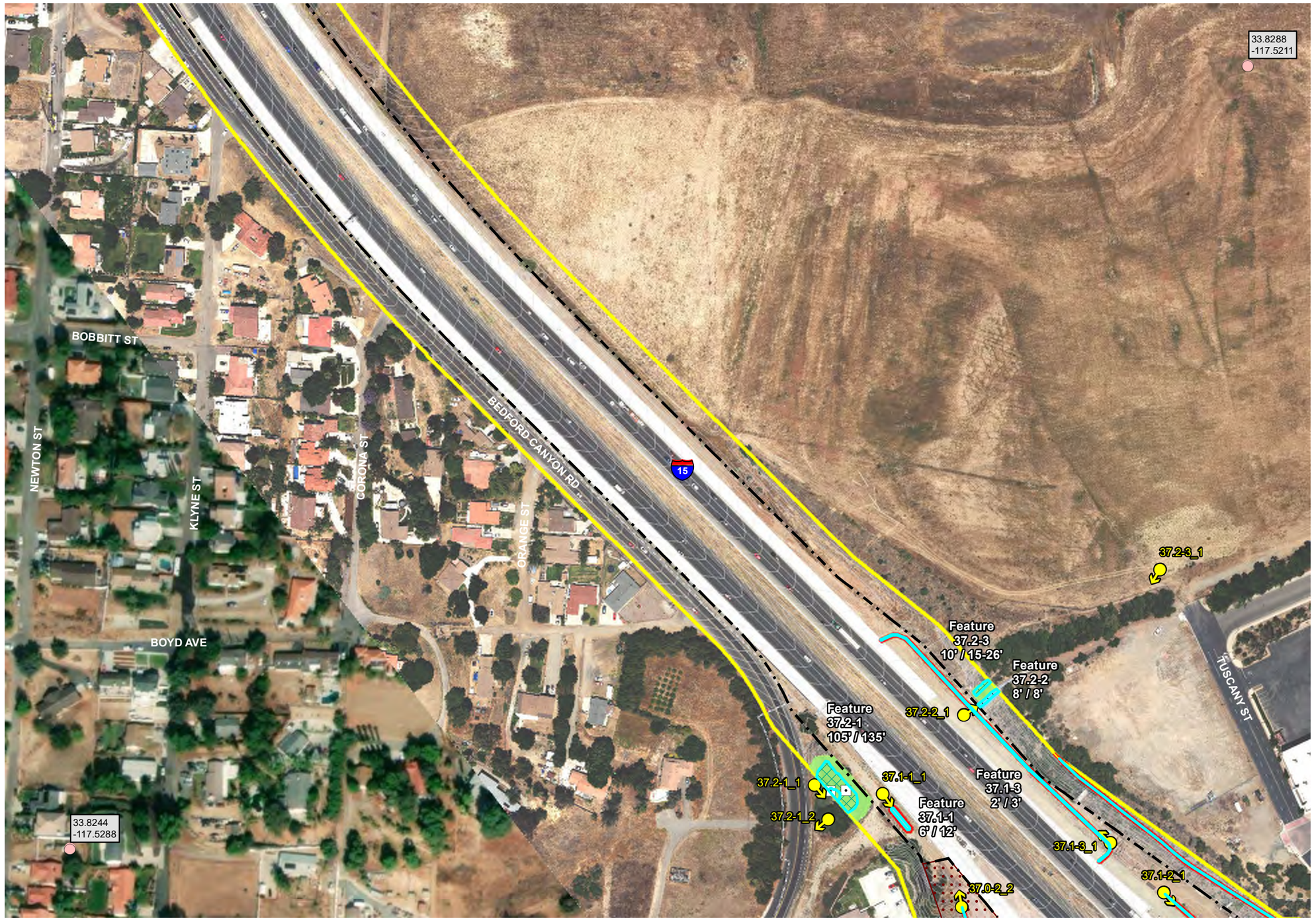
*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

N

0 100 200 Feet
1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Sheet 37 of 40
Jurisdictional Resources Map
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)



Legend

- Limits of Disturbance
- City/County Boundary
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- Constructed in Uplands (OHWM)
- OHWM (Ephemeral)
- OHWM (Intermittent)
- Wetland
- Constructed in Uplands (Bed-and-Bank)
- Riparian
- Streambed

*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

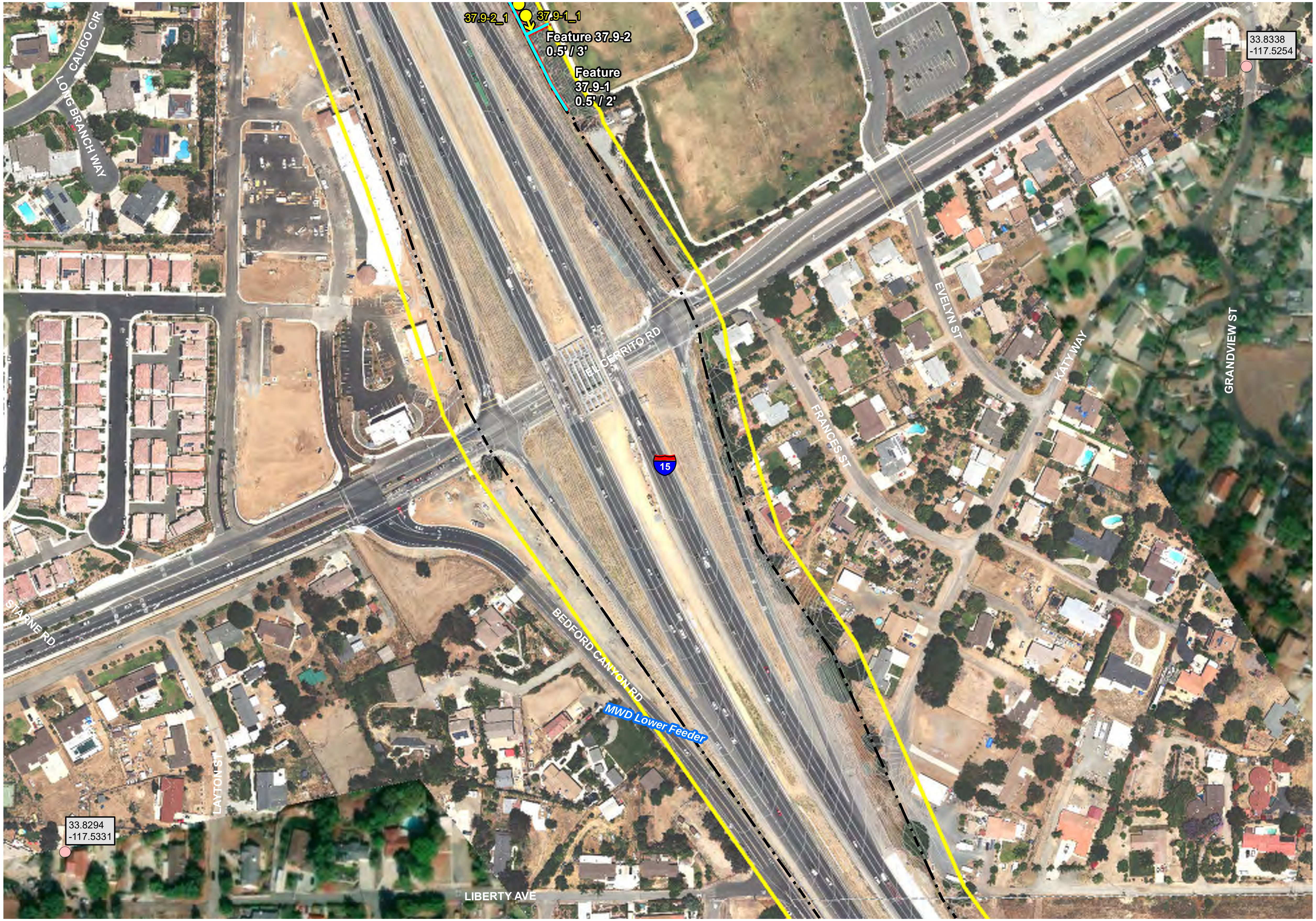
N

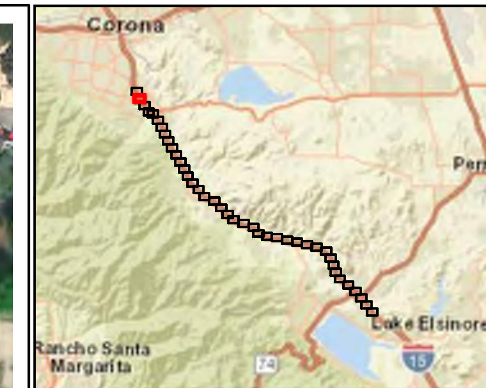
0 100 200 Feet

1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Sheet 38 of 40
Jurisdictional Resources Map
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)





Legend

- Limits of Disturbance
- City/County Boundary
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- Constructed in Uplands (OHWM)
- Constructed in Uplands (Bed-and-Bank)

*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

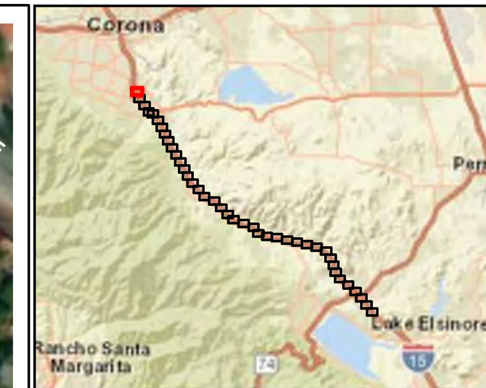
N

0 100 200 Feet

1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Sheet 39 of 40
Jurisdictional Resources Map
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)



Legend

- Limits of Disturbance
- City/County Boundary
- Topo
- Map Reference Point
- Soil Pit Location
- Photo Points

Survey Area

- Jurisdictional Study Area
- Relinquished Areas*

Jurisdictional Resources

- Constructed in Uplands (OHWM)
- Constructed in Uplands (Bed-and-Bank)

*These areas have been relinquished by Caltrans and have therefore been removed from the Limits of Disturbance.

N

0 100 200 Feet

1:2,400

Aerial Source: ICF (2020)
Date Prepared: 9/16/2021
Map Prepared by: HDR

Sheet 40 of 40
Jurisdictional Resources Map
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

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Appendix E. Jurisdictional Delineation Photographs

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Table A: I-15 Express Lanes Project Southern Extension – Jurisdictional Delineation Photographs

Photograph	Information
	Photograph #: 21.5-1_1 Photo Date: 8/12/20 Feature Number: 21.5-1 (Wasson Canyon Wash) Direction: Northeast Notes: View of Wasson Canyon Wash showing giant reed (*Arundo donax*) in opening between SB and NB I-15 Bridges.
	Photograph #: 22.5-1_1 Photo Date: 8/29/19 Feature Number: 22.5-1 (Arroyo Del Toro Channel, Segment 1) Direction: Southeast Notes: View of Feature 22.5-1 towards upstream.
	Photograph #: 22.6-1 Photo Date: 8/30/19 Feature Number: 22.6-1 Direction: Northwest Notes: (Arroyo Del Toro Channel, Segment 2)

Photograph	Information
	Photograph #: 22.6-2_1 Photo Date: 8/29/19 Feature Number: 22.6-2 Direction: Northeast Notes: View of culvert under Dexter Road, connecting Arroyo del Toro with Caltrans basin adjacent to NB I-15.
	Photograph #: 22.6-2_2 Photo Date: 8/29/19 Feature Number: 22.6-2 Direction: Southwest Notes: View of Caltrans basin associated with Arroyo del Toro.
	Photograph #: 23.0-1_1 Photo Date: 8/29/19 Feature Number: 23.0-1 Direction: Northeast Notes: Feature 23.0-1, located in the shoulder east of NB I-15, where culvert outlets into the shoulder of I-15 NB, toward east. Culvert is obscured by Eucalyptus and Tamarisk trees.

Photograph	Information
	Photograph #: 23.1-1_1 Photo Date: 8/29/2019 Feature Number: 23.1-1 Direction: Northeast Notes: Feature 23.1-1 located in the shoulder east of NB I-15, where culvert pictured outlets into the shoulder of NB I-15, toward east.
	Photograph #: 23.2-1_1 Photo Date: 2/8/21 Feature Number: 23.2-1 Direction: North Notes: View of concrete lined channel, Feature 23.2-1.
	Photograph #: 23.3-1_1 Photo Date: 8/29/2019 Feature Number: 23.3-1 Direction: Southwest Notes: View of culvert, wet soils, and riparian vegetation in Feature 23.3-1.

Photograph	Information
	Photograph #: 23.3-2_1 Photo Date: 2/8/21 Feature Number: 23.3-2 Direction: Southwest Notes: View of concrete channel and culvert for Feature 23.3-2.
	Photograph #: 23.4-1_1 Photo Date: 8/12/20 Feature Number: 23.4-1 Direction: Southwest Notes: View of concrete channel headwall and earthen channel for Feature 23.4-1.
	Photograph #: 24.0-1_1 Photo Date: 8/12/20 Feature Number: 24.0-1 Direction: Northeast Notes: View of concrete channel outlet for Feature 24.0-1.

Photograph	Information
	Photograph #: 24.2-2_1 Photo Date: 8/13/20 Feature Number: 24.2-2 Direction: East Notes: View of earthen hillside channel for Feature 24.2-2.
	Photograph #: 24.3-1_1 Photo Date: 8/13/20 Feature Number: 24.3-1 Direction: East Notes: View of metal culvert for Feature 24.3-1.
	Photograph #: 24.3-2_1 Photo Date: 8/13/20 Feature Number: 24.3-2 Direction: South Notes: View of flowing open water and riparian vegetation for Feature 24.3-2.

Photograph	Information
	Photograph #: 24.3-2_2 Photo Date: 8/13/20 Feature Number: 24.3-2 Direction: Southwest Notes: View of open water and riparian vegetation for Feature 24.3-2.
	Photograph #: 24.3-3_1 Photo Date: 8/12/20 Feature Number: 24.3-3 Direction: Southeast Notes: View of bedrock stream channel for Feature 24.3-3.
	Photograph #: 24.5-1_1 Photo Date: 8/13/20 Feature Number: 24.5-1 Direction: Northeast Notes: View of culvert from NB side of I-15 that conveys flows into Feature 24.5-1.

Photograph	Information
	Photograph #: 24.6-1_1 Photo Date: 8/13/20 Feature Number: 24.6-1 Direction: Northeast Notes: View of metal culvert and earthen channel for Feature 24.6-1.
	Photograph #: 24.6-2_1 Photo Date: 8/12/20 Feature Number: 24.6-2 Direction: Northeast Notes: View of dead herbs lining the channel for Feature 24.6-2.
	Photograph #: 24.7-1_1 Photo Date: 8/13/20 Feature Number: 24.7-1 Direction: Northeast Notes: View of hillside culvert and riparian vegetation for Feature 24.7-1.

Photograph	Information
	Photograph #: 24.8-1_1 Photo Date: 8/12/20 Feature Number: 24.8-1 Direction: South Notes: View of concrete brow ditch adjacent to I-15 freeway NB for Feature 24.8-1.
	Photograph #: 25.1-1_1 Photo Date: 8/13/20 Feature Number: 25.1-1 Direction: Northeast Notes: View of earthen channel, concrete culvert and riparian vegetation for Feature 25.1-1.
	Photograph #: 25.1-2_1 Photo Date: 8/12/20 Feature Number: 25.1-2 Direction: Northwest Notes: View of concrete culvert, earthen channel, and corrugated pipe for Feature 25.1-2.

Photograph	Information
	Photograph #: 25.2-1_1 Photo Date: 8/13/20 Feature Number: 25.2-1 Direction: Northwest Notes: View of riparian and emergent vegetation for feature 25.2-1.
	Photograph #: 25.3-1_1 Photo Date: 8/13/20 Feature Number: 25.3-1 Direction: Northeast Notes: View of earthen channel, riparian vegetation, and concrete channel for Feature 25.3-1.
	Photograph #: 25.3-2_1 Photo Date: 8/13/20 Feature Number: 25.3-2 Direction: Southwest Notes: View of earthen channel and concrete channel for Feature 25.3-2.

Photograph	Information
	Photograph #: 25.3-3_1 Photo Date: 8/13/20 Feature Number: 25.3-3 Direction: Northeast Notes: View of gravel-bottomed channel, riparian vegetation, and concrete headwall for Feature 25.3-3.
	Photograph #: 25.3-4_1 Photo Date: 8/13/20 Feature Number: 25.3-4 Direction: Northeast Notes: View of the earthen-bottomed channel and culvert for Feature 25.3-4.
	Photograph #: 25.5-1_1 Photo Date: 8/13/20 Feature Number: 25.5-1 Direction: Northeast Notes: View of sandy unvegetated channel and riparian vegetation for Feature 25.5-1.

Photograph	Information
	Photograph #: 25.5-1_2 Photo Date: 8/13/20 Feature Number: 25.5-1 Direction: South Notes: View of rip-rap bottomed channel for Feature 25.5-1.
	Photograph #: 25.5-1_3 Photo Date: 8/13/20 Feature Number: 25.5-1 Direction: Southwest Notes: View of rocky bottomed channel and riparian vegetation for Feature 25.5-1.
	Photograph #: 25.6-1_1 Photo Date: 8/13/20 Feature Number: 25.6-1 Direction: Northeast Notes: .View of concrete channel for Feature 25.6-1.

Photograph	Information
	Photograph #: 25.8-1_1 Photo Date: 8/13/20 Feature Number: 25.8-1 Direction: Southwest Notes: View of riparian vegetation for Feature 25.8-1.
	Photograph #: 25.8-1_2 Photo Date: 8/13/20 Feature Number: 25.8-1 Direction: Southwest Notes: View of riparian vegetation for Feature 25.8-1.
	Photograph #: 26.2-1_1 Photo Date: 8/26/20 Feature Number: 26.2-1 Direction: Northeast Notes: View of culvert and riparian vegetation for Feature 26.2-1.

Photograph	Information
	Photograph #: 26.2-1_2 Photo Date: 8/26/20 Feature Number: 26.2-1 Direction: Southwest Notes: View of riparian vegetation and basin for Feature 26.2-1.
	Photograph #: 26.2-1_3 Photo Date: 8/26/20 Feature Number: 26.2-1 Direction: Southeast Notes: View of riparian vegetation and basin for Feature 26.2-1.
	Photograph #: 26.4-1_1 Photo Date: 8/27/20 Feature Number: 26.4-1 Direction: Northwest Notes: View of riparian vegetation for Feature 26.4-1.

Photograph	Information
	Photograph #: 26.4-1_2 Photo Date: 8/27/20 Feature Number: 26.4-1 Direction: Southeast Notes: View of concrete culvert for Feature 26.4-1.
	Photograph #: 26.4-1_3 Photo Date: 8/27/20 Feature Number: 26.4-1 Direction: Northwest Notes: View of riparian vegetation for Feature 26.4-1.
	Photograph #: 26.4-1_4 Photo Date: 8/27/20 Feature Number: 26.4-1 Direction: South Notes: View of riparian vegetation and bare ground for Feature 26.4-1.

Photograph	Information
	Photograph #: 26.7-1_1 Photo Date: 8/26/20 Feature Number: 26.7-1 Direction: Northeast Notes: View of earthen channel, riparian vegetation, and concrete headwall for Feature 26.7-1.
	Photograph #: 26.7-1_2 Photo Date: 8/26/20 Feature Number: 26.7-1 Direction: Southwest Notes: View of riparian vegetation and bare ground for Feature 26.7-1.
	Photograph #: 26.7-2_1 Photo Date: 8/26/20 Feature Number: 26.7-2 Direction: East Notes: View of concrete culvert for Feature 26.7-2.

Photograph	Information
	Photograph #: 26.7-2_2 Photo Date: 8/26/20 Feature Number: 26.7-2 Direction: Northwest Notes: View of riparian vegetation and bare ground for Feature 26.7-2.
	Photograph #: 27.0-1_1 Photo Date: 12/14/20 Feature Number: 27.0-1 Direction: East Notes: View of concre6e v-ditch for Feature 27.0-1.

Photograph	Information
	Photograph #: 27.1-1_1 Photo Date: 8/26/20 Feature Number: 27.1-1 Direction: Northeast Notes: View of concrete headwall and earthen channel for Feature 27.1-1.
	Photograph #: 27.1-1_2 Photo Date: 8/26/20 Feature Number: 27.1-1 Direction: Southwest Notes: View of earthen bottomed channel for Feature 27.1-1.
	Photograph #: 27.1-2_1 Photo Date: 8/11/20 Feature Number: 27.1-2 Direction: Northeast Notes: View of concrete channel and riparian vegetation for Feature 27.1-2.

Photograph	Information
	Photograph #: 27.2-1_1 Photo Date: 8/26/20 Feature Number: 27.2-1 Direction: Northeast Notes: View of earthen channel and concrete culvert for Feature 27.2-1.
	Photograph #: 27.2-1_2 Photo Date: 8/26/20 Feature Number: 27.2-1 Direction: Northwest Notes: View of earthen channel for Feature 27.2-1.
	Photograph #: 27.2-1_3 Photo Date: 8/26/20 Feature Number: 27.2-1 Direction: Southeast Notes: View of earthen channel and riparian vegetation for Feature 27.2-1.

Photograph	Information
	Photograph #: 27.4-1_1 Photo Date: 8/26/20 Feature Number: 27.4-1 Direction: Northwest Notes: View of earthen channel, riparian vegetation, and four concrete channel headwalls for Feature 27.4-1.
	Photograph #: 27.4-1_2 Photo Date: 8/26/20 Feature Number: 27.4-1 Direction: Southeast Notes: View of earthen channel and riparian vegetation for Feature 27.4-1.
	Photograph #: 27.8-1_1 Photo Date: 2/8/21 Feature Number: 27.8-1 Direction: Southeast Notes: View of earthen swale for Feature 27.8-1.

Photograph	Information
	Photograph #: 27.8-1_2 Photo Date: 2/8/21 Feature Number: 27.8-1 Direction: Northwest Notes: View of roadside swale for Feature 27.8-1.
	Photograph #: 27.8-1_3 Photo Date: 2/8/21 Feature Number: 27.8-1 Direction: Northeast Notes: View of earthen swale for Feature 27.8-1.
	Photograph #: 27.9-1_1 Photo Date: 8/11/20 Feature Number: 27.9-1 Direction: East Notes: View of riparian vegetation for Feature 27.9-1.

Photograph	Information
	Photograph #: 27.9-1_2 Photo Date: 8/11/20 Feature Number: 27.9-1 Direction: Southwest Notes: View of riparian vegetation for Feature 27.9-1.
	Photograph #: 27.9-1_3 Photo Date: 8/11/20 Feature Number: 27.9-1 Direction: Northeast Notes: View of riparian vegetation for Feature 27.9-1.
	Photograph #:28.1-1_1 Photo Date: 8/11/20 Feature Number: 28.1-1 Direction: North Notes: View of flowing water and riparian vegetation for Feature 28.1-1.

Photograph	Information
	Photograph #: 28.1-1_2 Photo Date: 8/11/20 Feature Number: 28.1-1 Direction: North Notes: View of incised banks and riparian vegetation for Feature 28.1-1.
	Photograph #: 28.1-1_3 Photo Date: 8/11/20 Feature Number: 28.1-1 Direction: Northeast Notes: View of wrack and unvegetated channel for Feature 28.1-1.
	Photograph #:28.1-1_4 Photo Date: 8/11/20 Feature Number: 28.1-1 Direction: South Notes: View of flowing water and riparian vegetation for Feature 28.1-1.

Photograph	Information
	Photograph #: 28.1-1_5 Photo Date: 8/11/20 Feature Number: 28.1-1 Direction: Northeast Notes: View of flowing water and riparian vegetation for Feature 28.1-1.
	Photograph #: 28.1-1_6 Photo Date: 8/11/20 Feature Number: 28.1-1 Direction: Southeast Notes: View of riparian vegetation for Feature 28.1-1.
	Photograph #: 28.1-1_7 Photo Date: 8/11/20 Feature Number: 28.1-1 Direction: Northeast Notes: View of flowing water and riparian vegetation for Feature 28.1-1.

Photograph	Information
	Photograph #: 28.1-1_8 Photo Date: 8/11/20 Feature Number: 28.1-1 Direction: Northwest Notes: View of concrete culvert, flowing water and riparian vegetation for Feature 28.1-1.
	Photograph # :28.1-1_9 Photo Date: 8/11/20 Feature Number: 28.1-1 Direction: South Notes: View of riparian vegetation for Feature 28.1-1.
	Photograph #: 28.1-1_10 Photo Date: 8/11/20 Feature Number: 28.1-1 Direction: Northwest Notes: View of riparian vegetation for Feature 28.1-1.

Photograph	Information
	Photograph #: 28.2-1_1 Photo Date: 8/26/20 Feature Number: 28.2-1 Direction: Northeast Notes: View of earthen swale for Feature 28.2-1.
	Photograph #: 28.2-1_2 Photo Date: 8/26/20 Feature Number: 28.2-1 Direction: Southwest Notes: View of upland vegetation and swale for Feature 28.2-1.
	Photograph #: 28.4-1_1 Photo Date: 8/26/20 Feature Number: 28.4-1 Direction: Northeast Notes: View of earthen channel and concrete channel culvert for Feature 28.4-1.

Photograph	Information
	Photograph #: 28.4-1_2 Photo Date: 8/26/20 Feature Number: 28.4-1 Direction: Southwest Notes: View of earthen, incised channel, and riparian vegetation for Feature 28.4-1.
	Photograph #: 28.4-1_3 Photo Date: 8/26/20 Feature Number: 28.4-1 Direction: Southwest Notes: View of earthen channel for Feature 28.4-1.

Photograph	Information
	Photograph #: 28.6-2_1 Photo Date: 8/13/20 Feature Number: 28.6-2 Direction: Northeast Notes: View of earthen channel and concrete culvert for Feature 28.6-2.
	Photograph #: 28.9-1_1 Photo Date: 8/13/20 Feature Number: 28.9-1 Direction: Northeast Notes: View of concrete culvert for Feature 28.6-2.

Photograph	Information
	Photograph #: 29.1-1_1 Photo Date: 8/13/20 Feature Number: 29.1-1 Direction: North Notes: View of earthen channel for Feature 29.1-1.
	Photograph #: 29.1-1_2 Photo Date: 8/13/20 Feature Number: 29.1-1 Direction: North Notes: View of earthen channel and riparian vegetation for Feature 29.1-1.
	Photograph #: 29.1-1_3 Photo Date: 8/13/20 Feature Number: 29.1-1 Direction: South Notes: View of earthen channel and riparian vegetation for Feature 29.1-1.

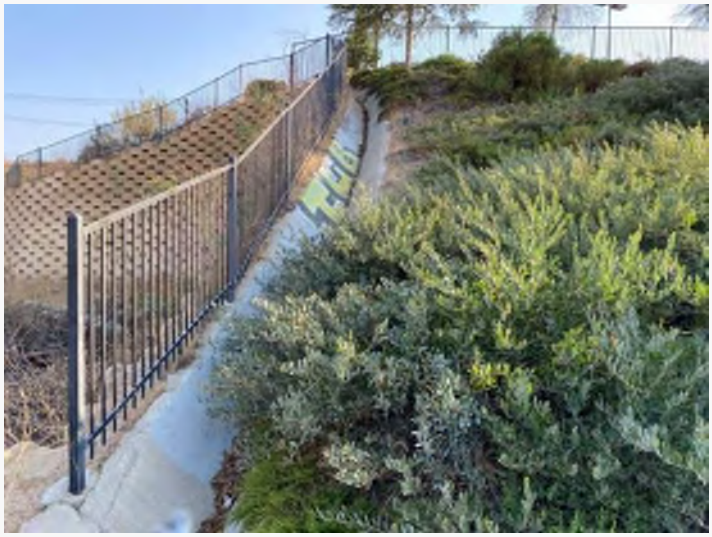
Photograph	Information
	Photograph #: 29.6-1_1 Photo Date: 8/25/20 Feature Number: 29.6-1 Direction: Southwest Notes: View of concrete headwall and culvert for Feature 29.6-1.
	Photograph #: 29.6-1_2 Photo Date: 8/25/20 Feature Number: 29.6-1 Direction: Northwest Notes: View of riparian vegetation for Feature 29.6-1.
	Photograph #: 29.6-1_3 Photo Date: 8/25/20 Feature Number: 29.6-1 Direction: North Notes: View of riparian vegetation and earthen channel for Feature 29.6-1.

Photograph	Information
	Photograph #: 30.0-1_1 Photo Date: 8/13/20 Feature Number: 30.0-1 Direction: North Notes: View of earthen channel and riparian vegetation for Feature 30.0-1.
	Photograph #: 30.0-1_2 Photo Date: 8/13/20 Feature Number: 30.0-1 Direction: South Notes: View of earthen channel for Feature 30.0-1.
	Photograph #: 30.0-1_3 Photo Date: 8/13/20 Feature Number: 30.0-1 Direction: Northeast Notes: View of earthen channel and basin for Feature 30.0-1.

Photograph	Information
	Photograph #: 30.0-1_4 Photo Date: 8/13/20 Feature Number: 30.0-1 Direction: Northeast Notes: View of earthen channel and basin for Feature 30.0-1.
	Photograph #: 30.0-1_5 Photo Date: 8/13/20 Feature Number: 30.0-1 Direction: North Notes: View of earthen channel and basin for Feature 30.0-1.
	Photograph #: 30.2-1_1 Photo Date: 8/13/20 Feature Number: 30.2-1 Direction: Southwest Notes: View of concrete culvert and standing water for Feature 30.2-1.

Photograph	Information
	Photograph #: 30.2-1_2 Photo Date: 8/13/20 Feature Number: 30.2-1 Direction: Southeast Notes: View of riparian vegetation and standing water for Feature 30.2-1.

Photograph	Information
	Photograph #: 30.2-1_3 Photo Date: 8/13/20 Feature Number: 30.2-1 Direction: Southwest Notes: View of riparian vegetation and concrete culvert for Feature 30.2-1.
	Photograph #:30.2-1_4 Photo Date: 8/13/20 Feature Number: 30.2-1 Direction: Northeast Notes: View of riparian vegetation for Feature 30.2-1.

Photograph	Information
	Photograph #: 30.2-2_1 Photo Date: 8/25/20 Feature Number: 30.2-2 Direction: Northeast Notes: View of concrete v-ditch for Feature 30.2-2.
	Photograph #: 30.2-2_2 Photo Date: 8/25/20 Feature Number: 30.2-2 Direction: Southeast Notes: View of concrete brow ditch for Feature 30.2-2.
	Photograph #: 30.2-2_3 Photo Date: 8/25/20 Feature Number: 30.2-2 Direction: North Notes: View of culvert for Feature 30.2-2.

Photograph	Information
	Photograph #: 30.2-2_4 Photo Date: 8/25/20 Feature Number: 30.2-2 Direction: Northwest Notes: View of concrete brow ditch for Feature 30.2-2.
	Photograph #: 30.3-1_1 Photo Date: 8/25/20 Feature Number: 30.3-1 Direction: East Notes: View of earthen channel for Feature 30.3-1.
	Photograph #: 30.3-1_2 Photo Date: 8/25/20 Feature Number: 30.3-1 Direction: West Notes: View of concrete channel with staining for Feature 30.3-1.

Photograph	Information
	Photograph #: 30.3-1_3 Photo Date: 8/25/20 Feature Number: 30.3-1 Direction: Southwest Notes: View of flowing water and riparian vegetation for Feature 30.3-1.
	Photograph #: 30.3-1_4 Photo Date: 8/25/20 Feature Number: 30.3-1_ Direction: Southwest Notes: View of flowing water and metal culvert for Feature 30.3-1.
	Photograph #: 30.3-1_5 Photo Date: 8/25/20 Feature Number: 30.3-1 Direction: Southeast Notes: View of flowing water and riparian vegetation for Feature 30.3-1.

Photograph	Information
	Photograph #: 30.4-1_1 Photo Date :2/8/21 Feature Number: 30.4-1 Direction: Northeast Notes: View of concrete channel for Feature 30.4-1.
	Photograph #: 30.4-1_2 Photo Date :2/8/21 Feature Number: 30.4-1 Direction: Northeast Notes: View of earthen channel and riparian vegetation for Feature 30.4-1.
	Photograph #: 30.4-1_3 Photo Date :2/8/21 Feature Number: 30.4-1 Direction: Southwest Notes: View of earthen, incised channel and riparian vegetation for Feature 30.4-1.

Photograph	Information
	Photograph #:30.4-1_4 Photo Date :2/8/21 Feature Number: 30.4-1 Direction: Northeast Notes: View of earthen channel, riparian vegetation, and rip-rap bank for Feature 30.4-1.
	Photograph #: 30.4-1_5 Photo Date :2/8/21 Feature Number: 30.4-1 Direction: West Notes: View of riparian vegetation for Feature 30.4-1
	Photograph #: 30.4-1_6 Photo Date :2/8/21 Feature Number: 30.4-1 Direction: Northeast Notes: View of earthen channel, riparian vegetation, and rip-rap bank for Feature 30.4-1.

Photograph	Information
	Photograph #: 30.5-1_1 Photo Date: 8/26/20 Feature Number: 30.5-1 Direction: Northeast Notes: View of earthen swale with rip-rap pad and concrete culvert for Feature 30.5-1.
	Photograph #: 30.8-1_1 Photo Date: 8/26/20 Feature Number: 30.8-1 Direction: Southwest Notes: View of flowing water and riparian vegetation for Feature 30.8-1.
	Photograph #: 31.0-1_1 Photo Date: 8/26/20 Feature Number: 31.0-1 Direction: Southeast Notes: View of riparian vegetation surrounding basin for Feature 31.0-1.

Photograph	Information
	Photograph #: 31.0-2_1 Photo Date: 8/26/20 Feature Number: 31.0-2 Direction: North Notes: View of earthen swale for Feature 31.0-2.
	Photograph #: 31.0-3_1 Photo Date: 8/26/20 Feature Number: 31.0-3 Direction: Northwest Notes: View of earthen hillside ditch adjacent to I-15 freeway SB for Feature 31.0-3.
	Photograph #: 31.0-3_2 Photo Date: 8/26/20 Feature Number: 31.0-3 Direction: Southeast Notes: View of earthen hillside ditch for Feature 31.0-3.

Photograph	Information
	Photograph #: 31.0-4_1 Photo Date: 8/26/20 Feature Number: 31.0-4 Direction: Northwest Notes: View of roadside swale and drop drain adjacent to I-15 freeway SB for Feature 31.0-4.
	Photograph #: 31.2-1_1 Photo Date: 8/26/20 Feature Number: 31.2-1 Direction: Southeast Notes: View of roadside swale adjacent to I-15 freeway NB for Feature 31.2-1.
	Photograph #: 31.2-2_1 Photo Date: 8/26/20 Feature Number: 31.2-2 Direction: Northeast Notes: View concrete ditch and drop drain perpendicular to I-15 freeway SB for Feature 31.2-2.

Photograph	Information
	Photograph #: 31.3-1_1 Photo Date: 8/26/20 Feature Number: 31.3-1 Direction: Northwest Notes: View of hillside ditch adjacent to I-15 freeway SB for Feature 31.3-1.
	Photograph #: 31.3-1_2 Photo Date: 8/26/20 Feature Number: 31.3-1 Direction: Southeast Notes: View of hillside ditch for Feature 31.3-1.

Photograph	Information
	Photograph #: 31.3-1_3 Photo Date: 8/26/20 Feature Number: 31.3-1 Direction: Northwest Notes: View of earthen swale perpendicular to I-15 freeway SB for Feature 31.3-1.
	Photograph #: 31.3-1_4 Photo Date: 8/26/20 Feature Number: 31.3-1 Direction: Southwest Notes: View of concrete brow ditch with tamarisk for Feature 31.3-1.
	Photograph #: 31.3-1_5 Photo Date: 8/26/20 Feature Number: 31.3-1 Direction: Southeast Notes: View of earthen swale for Feature 31.3-1.

Photograph	Information
	Photograph #: 31.3-2_1 Photo Date: 8/26/20 Feature Number: 31.3-2 Direction: Southeast Notes: View of roadside swale adjacent to I-15 freeway NB for Feature 31.3-2.
	Photograph #: 31.4-1_1 Photo Date: 8/26/20 Feature Number: 31.4-1 Direction: Southwest Notes: View of concrete brow ditch and Tamarisk for Feature 31.4-1.

Photograph	Information
	Photograph #: 31.4-2_1 Photo Date: 08/26/20 Feature Number: 31.4-2 Direction: Southeast Notes: View of metal culvert and riparian vegetation for Feature 31.4-2.
	Photograph #: 31.4-2_2 Photo Date: 08/26/20 Feature Number: 31.4-2 Direction: Northeast Notes: View of riparian vegetation for Feature 31.4-2.
	Photograph #: 31.4-2_3 Photo Date: 08/26/20 Feature Number: 31.4-2 Direction: Southeast Notes: View of riparian vegetation and incised channel for Feature 31.4-2.

Photograph	Information
	Photograph #: 31.5-1_1 Photo Date: 8/26/20 Feature Number: 31.5-1 Direction: Southeast Notes: View of hillside ditch adjacent to I-15 freeway NB for Feature 31.5-1.
	Photograph #: 31.5-2_1 Photo Date: 8/26/20 Feature Number: 31.5-2 Direction: Northwest Notes: View of riparian vegetation for Feature 31.5-2.
	Photograph #: 31.5-2_2 Photo Date: 8/26/20 Feature Number: 31.5-2 Direction: Northwest Notes: View of riparian vegetation for Feature 31.5-2.

Photograph	Information
	Photograph #: 31.5-3_1 Photo Date: 8/13/20 Feature Number: 31.5-3 Direction: Southwest Notes: View of pipe conveying flows for Feature 31.5-3.
	Photograph #: 31.5-3_2 Photo Date: 8/13/20 Feature Number: 31.5-3 Direction: Southeast Notes: View of earthen channel for Feature 31.5-3.
	Photograph #: 31.5-4_1 Photo Date: 8/26/20 Feature Number: 31.5-4 Direction: Northeast Notes: View of earthen swale for Feature 31.5-4.

Photograph	Information
	Photograph #: 31.6-1_1 Photo Date: 8/13/20 Feature Number: 31.6-1 Direction: Northeast Notes: View of culvert for Feature 31.6-1.
	Photograph #: 31.6-1_2 Photo Date: 8/13/20 Feature Number: 31.6-1 Direction: Southwest Notes: View of earthen channel and riparian vegetation for Feature 31.6-1.
	Photograph #: 31.6-2_1 Photo Date: 8/26/20 Feature Number: 31.6-2 Direction: Northeast Notes: View of earthen swale for Feature 31.6-2.

Photograph	Information
	Photograph #: 31.6-3_1 Photo Date: 8/26/20 Feature Number: 31.6-3 Direction: Northeast Notes: View of earthen swale for Feature 31.6-3.
	Photograph #: 31.7-1_1 Photo Date: 8/13/20 Feature Number: 31.7-1 Direction: Southeast Notes: View of concrete v-ditch adjacent to I-15 freeway NB for Feature 31.7-1.
	Photograph #: 31.7-2_1 Photo Date: 8/26/20 Feature Number: 31.7-2 Direction: South Notes: View of riparian vegetation for Feature 31.7-2.

Photograph	Information
	Photograph #: 31.7-2_2 Photo Date: 8/13/20 Feature Number: 31.7-2 Direction: Southwest Notes: View of riparian vegetation for Feature 31.7-2.
	Photograph #: 31.7-3_1 Photo Date: 8/13/20 Feature Number: 31.7-3 Direction: Northwest Notes:. View of culvert for Feature 31.7-3.
	Photograph #: 31.7-3_2 Photo Date: 8/13/20 Feature Number: 31.7-3 Direction: South Notes: View of earthen channel for Feature 31.7-3.

Photograph	Information
	Photograph #: 31.7-4_1 Photo Date: 8/26/20 Feature Number: 31.7-4 Direction: Northeast Notes:. View of riparian vegetation for Feature 31.7-4.
	Photograph #: 31.8-1_1 Photo Date: 8/13/20 Feature Number: 31.8-1 Direction: Northwest Notes: View of metal culvert and swale at toe of slope adjacent to I-15 freeway SB for Feature 31.8-1.
	Photograph #:31.8-1_2 Photo Date: 8/13/20 Feature Number: 31.8-1 Direction: Northeast Notes: View of swale for Feature 31.8-1.

Photograph	Information
	Photograph #: 31.8-1_3 Photo Date: 8/13/20 Feature Number: 31.8-1 Direction: Northeast Notes: View of roadside swale for Feature 31.8-1.
	Photograph #: 31.8-1_4 Photo Date: 8/13/20 Feature Number: 31.8-1 Direction: Northwest Notes: View of roadside swale for Feature 31.8-1.
	Photograph #: 31.8-1_5 Photo Date: 8/13/20 Feature Number: 31.8-1 Direction: Northeast Notes: View of earthen roadside channel for feature 31.8-1.

Photograph	Information
	Photograph #: 31.8-2_1 Photo Date: 8/26/20 Feature Number: 31.8-2 Direction: Northeast Notes:. View of Feature 31.8-2.
	Photograph #: 31.9-1_1 Photo Date: 8/13/20 Feature Number: 31.9-1 Direction: Southeast Notes:. View of dense mulefat vegetation in Feature 31.9-1. This portion of the channel is dry, but upstream had surface water near a clogged culvert at the time of the survey.
	Photograph #: 31.9-2_1 Photo Date: 8/13/20 Feature Number: 31.9-2 (Mayhew Wash) Direction: North Notes:. View towards Feature 31.9-2 taken from the point where Features 31.9-1 and 31.9-2 converge.

Photograph	Information
	Photograph #: 31.9-2_2 Photo Date: 8/13/20 Feature Number: 31.9-2 (Mayhew wash) Direction: Northwest Notes:. View of grouted rip-rap area beyond Feature 31.9-2_2 taken from edge of upper bank/CDFW limits
	Photograph #: 31.9-2_3 Photo Date: 8/13/20 Feature Number: 31.9-2 (Mayhew Wash) Direction: Northeast Notes: View of unvegetated braid with coarse sandy soils with adjacent upland-vegetated terrace for Feature 31.9-2.
	Photograph #: 31.9-2_4 Photo Date: 8/13/20 Feature Number: 31.9-2 (Mayhew Wash) Direction: Northeast Notes: View of unvegetated braid with coarse sandy soils with adjacent vegetated terrace for Feature 31.9-2.

Photograph	Information
	Photograph #: 31.9-2_5 Photo Date: 8/13/20 Feature Number: 31.9-2 (Mayhew Wash) Direction: Northeast Notes: View of unvegetated braid with coarse sandy soils with adjacent upland-vegetated terrace for Feature 31.9-2.
	Photograph #: 31.9-2_6 Photo Date: 8/13/20 Feature Number: 31.9-2 (Mayhew Wash) Direction: Northeast Notes: View of unvegetated braid with coarse sandy soils with adjacent upland-vegetated terrace for Feature 31.9-2.
	Photograph #: 32.1-1_1 Photo Date: 8/13/20 Feature Number: 32.1-1 Direction: Southwest Notes: View of concrete pad for Feature 32.1-1.

Photograph	Information
	Photograph #: 32.1-1_2 Photo Date: 8/13/20 Feature Number: 32.1-1 Direction: Northeast Notes: View of concrete pad and culvert for Feature 32.1-1.
	Photograph #: 32.1-1_3 Photo Date: 8/13/20 Feature Number: 32.1-1 Direction: Northeast Notes: View of concrete culvert for Feature 32.1-1.
	Photograph #: 32.1-2_1 Photo Date: 8/13/20 Feature Number: 32.1-2 Direction: West Notes: View of culvert, rocky channel and standing water for Feature 32.1-2.

Photograph	Information
	Photograph #: 32.1-2_2 Photo Date: 8/13/20 Feature Number: 32.1-2 Direction: Northeast Notes: View of riparian vegetation for Feature 32.1-2.
	Photograph #:32.1-3_1 Photo Date: 2/8/210 Feature Number: 32.1-3 Direction: Northwest Notes: View of v-ditch adjacent to I-15 freeway SB for Feature 32.1-3.
	Photograph #: 32.3-1_1 Photo Date: 8/27/20 Feature Number: 32.3-1 Direction: Northeast Notes: View of earthen channel for Feature 32.3-1.

Photograph	Information
	Photograph #: 32.3-2_1 Photo Date: 8/27/20 Feature Number: 32.3-2 Direction: Northeast Notes: View of riparian vegetation for Feature 32.3-2.
	Photograph #: 32.5-1_1 Photo Date: 8/13/20 Feature Number: 32.5-1 Direction: Southeast Notes: View of swale adjacent to I-15 freeway NB for Feature 32.5-1.
	Photograph #: 32.5-1_2 Photo Date: 8/13/20 Feature Number: 32.5-1 Direction: Northeast Notes: View of culvert for Feature 32.5-1.

Photograph	Information
	Photograph #: 32.6-1_1 Photo Date: 8/13/20 Feature Number: 32.6-1 Direction: Northeast Notes: View of earthen channel for Feature 32.6-1.
	Photograph #: 32.6-2_1 Photo Date: 8/13/20 Feature Number: 32.6-2 Direction: Northeast Notes: View of concrete culvert and saltgrass (*Distichlis spicata*) for Feature 32.6-2.
	Photograph #: 32.6-3_1 Photo Date: 8/27/20 Feature Number: 32.6-3 Direction: Northwest Notes: View of concrete culvert for Feature 32.6-3.

Photograph	Information
	Photograph #: 32.8-1_1 Photo Date: 8/13/20 Feature Number: 32.8-1 Direction: Northwest Notes: View of roadside swale adjacent to I-15 freeway SB for Feature 32.8-1.
	Photograph #: 32.9-1_1 Photo Date: 8/13/20 Feature Number: 32.9-1 (Coldwater Wash) Direction: Northwest Notes: View of riparian vegetation, earthen channel and incised banks for Feature 32.9-1.
	Photograph #:32.9-1_2 Photo Date: 8/13/20 Feature Number: 32.9-1 (Coldwater Wash) Direction: Northeast Notes: View of riparian vegetation, earthen channel and incised banks for Feature 32.9-1.

Photograph	Information
	Photograph #: 32.9-1_3 Photo Date: 8/13/20 Feature Number: 32.9-1 (Coldwater Wash) Direction: Southeast Notes: View of metal culvert, riparian vegetation, and seep for Feature 32.9-1.
	Photograph #: 32.9-1_4 Photo Date: 8/13/20 Feature Number: 32.9-1 (Coldwater Wash) Direction: Southeast Notes: View of riparian vegetation and rip-rap for Feature 32.9-1.
	Photograph #: 32.9-1_5 Photo Date: 8/13/20 Feature Number: 32.9-1 (Coldwater Wash) Direction: Northwest Notes: View of riparian vegetation for Feature 32.9-1.

Photograph	Information
	Photograph #:32.9-1_6 Photo Date: 8/13/20 Feature Number: 32.9-1 (Coldwater Wash) Direction: Southwest Notes: View of riparian vegetation for Feature 32.9-1.
	Photograph #: 32.9-1_7 Photo Date: 8/13/20 Feature Number: 32.9-1 (Coldwater Wash) Direction: South Notes: View of earthen channel and riparian vegetation for Feature 32.9-1.
	Photograph #: 32.9-1_8 Photo Date: 8/13/20 Feature Number: 32.9-1 (Coldwater Wash) Direction: Southwest Notes: View of earthen channel, rip-rap and algae for Feature 32.9-1.

Photograph	Information
	Photograph #: 32.9-1_9 Photo Date: 8/13/20 Feature Number: 32.9-1 (Coldwater Wash) Direction: Northeast Notes: View of riparian vegetation and earthen channel for Feature 32.9-1.
	Photograph #: 32.9-1_10 Photo Date: 8/13/20 Feature Number: 32.9-1 (Coldwater Wash) Direction: Southwest Notes: View of riparian vegetation and earthen channel for Feature 32.9-1.
	Photograph #: 33.0-1_1 Photo Date: 8/13/20 Feature Number: 33.0-1 Direction: Northwest Notes: View of swale for Feature 33.0-1.

Photograph	Information
	Photograph #: 33.1-1_1 Photo Date: 8/27/20 Feature Number: 33.1-1 Direction: Northwest Notes: View of drain and straw wattles for Feature 33.1-1.
	Photograph #: 33.5-1_1 Photo Date: 8/12/20 Feature Number: 33.5-1 Direction: Southwest Notes: View of swale for Feature 33.5-1.
	Photograph #: 33.5-1_2 Photo Date: 8/12/20 Feature Number: 33.5-1 Direction: Northeast Notes: View of concrete culvert for Feature 33.5-1.

Photograph	Information
	Photograph #: 33.6-1_1 Photo Date: 8/12/20 Feature Number: 33.6-1 Direction: Northeast Notes: View of earthen channel and concrete culvert for Feature 33.6-1.
	Photograph #: 33.6-1_2 Photo Date: 8/12/20 Feature Number: 33.6-1 Direction: Southwest Notes: View of earthen channel for Feature 33.6-1.
	Photograph #: 33.6-2_1 Photo Date: 8/12/20 Feature Number: 33.6-2 Direction: Southwest Notes: View of riparian vegetation and concrete headwall for Feature 33.6-2.

Photograph	Information
	Photograph #: 33.6-3_1 Photo Date: 8/27/20 Feature Number: 33.6-3 Direction: Southeast Notes: View of earthen channel and concrete headwall for Feature 33.6-3.
	Photograph #: 33.8-1_1 Photo Date: 8/12/20 Feature Number: 33.8-1 Direction: Southwest Notes: View of riparian vegetation for Feature 33.8-1.
	Photograph #: 33.8-2_1 Photo Date: 8/27/20 Feature Number: 33.8-2 Direction: Southeast Notes: View of earthen channel and concrete headwall for Feature 33.8-2.

Photograph	Information
	Photograph #: 33.8-2_2 Photo Date: 8/27/20 Feature Number: 33.8-2 Direction: Southeast Notes: View of riparian vegetation for Feature 33.8-2.
	Photograph #: 33.8-2_3 Photo Date: 8/27/20 Feature Number: 33.8-2 Direction: Southwest Notes: View of concrete channel for Feature 33.8-2.

Photograph	Information
	Photograph #: 33.8-2_4 Photo Date: 8/27/20 Feature Number: 33.8-2 Direction: Southwest Notes: View of incised channel for Feature 33.8-2.
	Photograph #: 33.8-3_1 Photo Date: 8/12/20 Feature Number: 33.8-3 Direction: Southeast Notes: View of concrete ditch and riparian vegetarian for Feature 33.8-3.
	Photograph #: 33.8-3_2 Photo Date: 8/12/20 Feature Number: 33.8-3 Direction: Southwest Notes: View of concrete ditch and riparian vegetarian for Feature 33.8-3.

Photograph	Information
	Photograph #: 33.8-3_3 Photo Date: 8/12/20 Feature Number: 33.8-3 Direction: Northeast Notes: View of concrete ditch conveying roadside flows for Feature 33.8-3.
	Photograph #: 33.9-1_1 Photo Date: 8/27/20 Feature Number: 33.9-1 Direction: Northeast Notes: View of concrete ditch and riparian vegetation for Feature 33.9-1.

Photograph	Information
	Photograph #: 34.0-1_1 Photo Date: 8/12/20 Feature Number: 34.0-1 Direction: Northwest Notes: View of concrete pad and swale for Feature 34.0-1.
	Photograph #: 34.0-1_2 Photo Date: 8/12/20 Feature Number: 34.0-1 Direction: Northwest Notes: View of concrete culvert for Feature 34.0-1.
	Photograph #: 34.0-2_1 Photo Date: 8/27/20 Feature Number: 34.0-2 Direction: Northeast Notes: View of riparian vegetation for Feature 34.0-2.

Photograph	Information
	Photograph #: 34.1-1_1 Photo Date: 8/12/20 Feature Number: 34.1-1 Direction: Southeast Notes: View of concrete v-ditch and riparian vegetation for Feature 34.1-1.

Photograph	Information
	Photograph #: 34.2-1_1 Photo Date: 8/12/20 Feature Number: 34.2-1 Direction: Southwest Notes: View of concrete v-ditch and riparian vegetation for Feature 34.1-1.
	Photograph #: 34.2-2_1 Photo Date: 8/12/20 Feature Number: 34.2-2 Direction: Northwest Notes: View of concrete v-ditch and riparian vegetation for Feature 34.1-1.

Photograph	Information
	Photograph #: 34.2-3_1 Photo Date: 8/12/20 Feature Number: 34.2-3 Direction: Southwest Notes: View of concrete channel for Feature 34.2-3.
	Photograph #: 34.2-3_2 Photo Date: 8/12/20 Feature Number: 34.2-3 Direction: Northeast Notes: View of rip-rap and concrete culvert for Feature 34.2-3.
	Photograph #: 34.3-1_3 Photo Date: 8/12/20 Feature Number: 34.3-1 Direction: Northwest Notes: View of concrete v-ditch for Feature 34.3-1.

Photograph	Information
	Photograph #: 34.7-1_1 Photo Date: 8/27/20 Feature Number: 34.7-1 (McBride Canyon) Direction: Southeast Notes: View of concrete channel with staining for Feature 34.7-1.
	Photograph #: 34.7-1_2 Photo Date: 8/27/20 Feature Number: 34.7-1 (McBride Canyon) Direction: Southwest Notes: View of concrete channel with staining for Feature 34.7-1.
	Photograph #: 35.5-1_1 Photo Date: 8/27/20 Feature Number: 35.5-1 Direction: Northeast Notes: View of riparian vegetation for Feature 35.5-1.

Photograph	Information
	Photograph #: 35.6-1_1 Photo Date: 8/12/20 Feature Number: 35.6-1 Direction: Southeast Notes: View of concrete v-ditch for Featurev35.6-1.
	Photograph #: 35.6-1_2 Photo Date: 8/12/20 Feature Number: 35.6-1 Direction: Northeast Notes: View of concrete culvert for Feature 35.6-1.
	Photograph #: 35.6-2_1 Photo Date: 8/25/20 Feature Number: 35.6-2 Direction: Northeast Notes: View of rocky hillside channel for Feature 35.6-2.

Photograph	Information
	Photograph #:35.6-2_2 Photo Date: 8/25/20 Feature Number: 35.6-2 Direction: Southwest Notes: View of concrete culvert for Feature 35.6-2.
	Photograph #: 35.6-3_1 Photo Date: 8/25/20 Feature Number: 35.6-3 Direction: Northeast Notes: View of concrete channel for Feature 35.6-3.
	Photograph #: 35.7-1_1 Photo Date: 8/25/20 Feature Number: 35.7-1 Direction: Southwest Notes: View of rip-rap channel and riparian vegetation for Feature 35.7-1.

Photograph	Information
	Photograph #: 35.7-1_2 Photo Date: 8/25/20 Feature Number: 35.7-1 Direction: Northwest Notes: View of riparian vegetation and open water for Feature 35.7-1.
	Photograph #: 35.7-2_1 Photo Date: 8/25/20 Feature Number: 35.7-2 Direction: Northwest Notes: View of concrete v-ditch for Feature 35.7-2.

Photograph	Information
	Photograph #: 35.7-3_1 Photo Date: 8/25/20 Feature Number: 35.7-3 Direction: Northeast Notes: View of concrete channel with staining and concrete culvert for Feature 35.7-3.
	Photograph #: 35.7-3_2 Photo Date: 8/25/20 Feature Number: 35.7-3 Direction: West Notes: View of concrete channel with staining and concrete culvert for Feature 35.7-3.

Photograph	Information
	Photograph #: 35.8-1_1 Photo Date: 8/25/20 Feature Number: 35.8-1 Direction: Northwest Notes: View of concrete v-ditch for Feature 35.8-1.
	Photograph #: 35.9-1_1 Photo Date: 8/25/20 Feature Number: 35.9-1 Direction: Northeast Notes: View of concrete channel for Feature 35.9-1.
	Photograph #: 36.1-1_1 Photo Date: 8/26/20 Feature Number: 36.1-1 Direction: Northeast Notes: View of concrete culvert for Feature 36.1-1.

Photograph	Information
	Photograph #: 36.1-1_2 Photo Date: 8/26/20 Feature Number: 36.1-1 Direction: East Notes: View of swale for Feature 36.1-1.
	Photograph #: 36.1-1_3 Photo Date: 8/26/20 Feature Number: 36.1-1 Direction: Northwest Notes: View of swale for Feature 36.1-1.
	Photograph #: 36.4-1_1 Photo Date: 8/12/20 Feature Number: 36.4-1 Direction: Northwest Notes: View of concrete swale for Feature 36.4-1.

Photograph	Information
	Photograph #: 36.5-1_1 Photo Date: 8/12/20 Feature Number: 36.5-1 (Bedford Wash) Direction: Southwest Notes: View of earthen channel and riparian vegetation for Feature 36.5-1.
	Photograph #: 36.5-1_2 Photo Date: 8/12/20 Feature Number: 36.5-1 (Bedford Wash) Direction: Southeast Notes: Concrete culvert and rip-rap for Feature 36.5-1.
	Photograph #: 36.5-1_3 Photo Date: 8/12/20 Feature Number: 36.5-1 (Bedford Wash) Direction: Northeast Notes: View of earthen channel and riparian vegetation for Feature 36.5-1.
	Photograph #: 36.5-1_4 Photo Date: 8/12/20 Feature Number: 36.5-1 (Bedford Wash) Direction: Southwest Notes: View of earthen channel for Feature 36.5-1.

Photograph	Information
	Photograph #: 36.5-1_5 Photo Date: 8/12/20 Feature Number: 36.5-1 (Bedford Wash) Direction: Southwest Notes: View of earthen channel and riparian vegetation for Feature 36.5-1.
	Photograph #:36.5-1_6 Photo Date: 8/12/20 Feature Number: 36.5-1 (Bedford Wash) Direction: Southwest Notes: View of earthen channel and riparian vegetation for Feature 36.5-1.
	Photograph #: 36.5-1_7 Photo Date: 8/12/20 Feature Number: 36.5-1 (Bedford Wash) Direction: Southwest Notes: View of earthen channel and riparian vegetation for Feature 36.5-1.

Photograph	Information
	Photograph #: 36.5-1_8 Photo Date: 8/12/20 Feature Number: 36.5-1 (Bedford Wash) Direction: Southwest Notes: View of earthen channel and riparian vegetation for Feature 36.5-1.
	Photograph #: 36.7-1_1 Photo Date: 8/25/20 Feature Number: 36.7-1 Direction: Southwest Notes: View of rip-rap channels and earthen basin for Feature 36.7-1.
	Photograph #: 36.8-1_1 Photo Date: 8/25/20 Feature Number: 36.8-1 Direction: East Notes: View of concrete v-ditch for Feature 36.8-1.

Photograph	Information
	Photograph #: 36.8-1_2 Photo Date: 8/25/20 Feature Number: 36.8-1 Direction: Southeast Notes: View of concrete v-ditch for Feature 36.8-1.
	Photograph #: 36.8-1_3 Photo Date: 8/25/20 Feature Number: 36.8-1 Direction: Southeast Notes: View of concrete v-ditch for Feature 36.8-1.

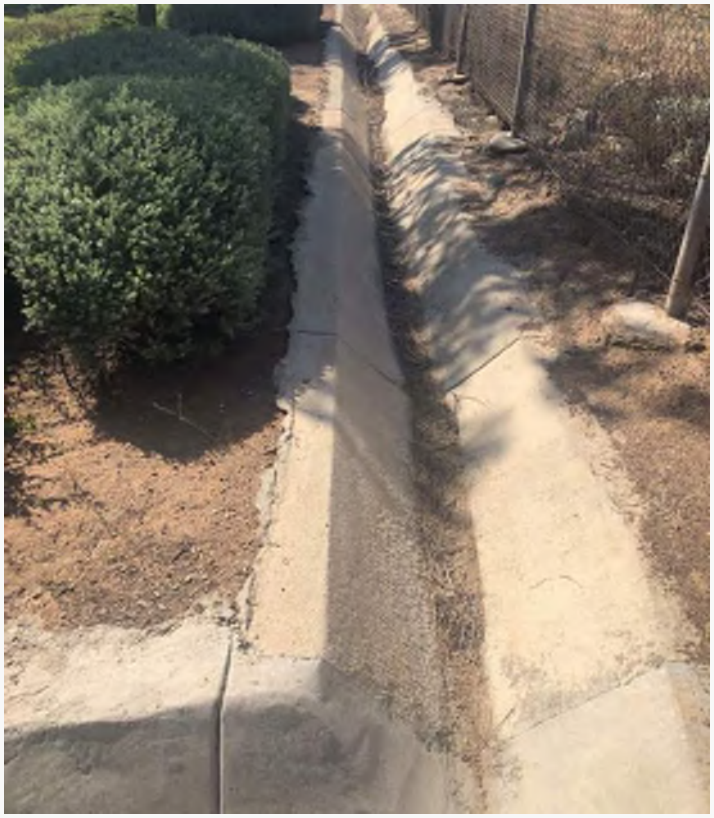
Photograph	Information
	Photograph #: 37.0-1_1 Photo Date: 8/26/20 Feature Number: 37.0-1 Direction: Northwest Notes: View of roadside rocky swale for Feature 37.0-1.
	Photograph #: 37.0-1_2 Photo Date: 8/26/20 Feature Number: 37.0-1 Direction: Northwest Notes: View of roadside rocky swale for Feature 37.0-1.
	Photograph #: 37.0-2_1 Photo Date: 8/25/20 Feature Number: 37.0-2 Direction: Southeast Notes: View of concrete v-ditch for Feature 37.0-2.

Photograph	Information
	Photograph #: 37.0-2_2 Photo Date: 8/25/20 Feature Number: 37.0-2 Direction: Northwest Notes: View of concrete v-ditch for Feature 37.0-2.
	Photograph #: 37.0-3_1 Photo Date: 8/25/20 Feature Number: 37.0-3 Direction: Southwest Notes: View of concrete v-ditch for Feature 37.0-3.

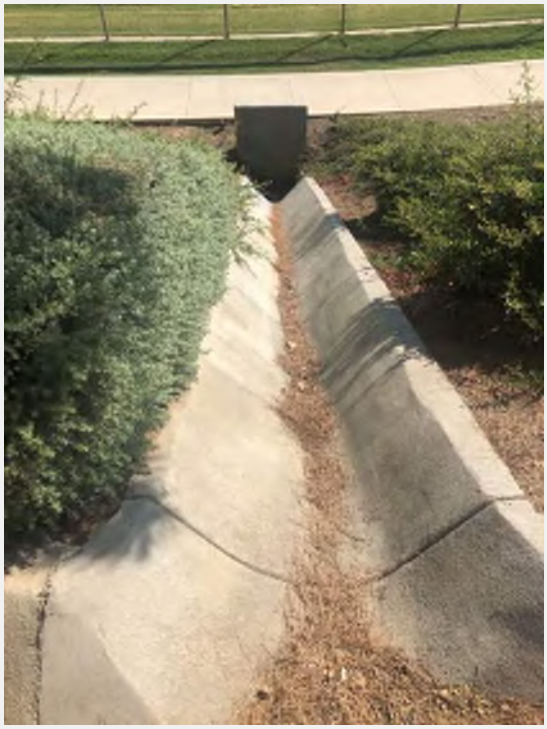
Photograph	Information
	Photograph #: 37.1-1_1 Photo Date: 8/25/20 Feature Number: 37.1-1 Direction: Southeast Notes: View of drop drains and basin for Feature 37.1-1.
	Photograph #: 37.1-2_1 Photo Date: 8/25/20 Feature Number: 37.1-2 Direction: Southeast Notes: View of roadside swale for Feature 37.1-2.
	Photograph #: 37.1-2_2 Photo Date: 8/25/20 Feature Number: 37.1-2 Direction: Southeast Notes: View of concrete brow ditch for Feature 37.1-2.

Photograph	Information
	Photograph #: 37.1-2_3 Photo Date: 8/25/20 Feature Number: 37.1-2 Direction: Northwest Notes: View of concrete brow ditch for Feature 37.1-2.
	Photograph #: 37.1-3_1 Photo Date: 8/25/20 Feature Number: 37.1-3 Direction: Northwest Notes: View of concrete v-ditch for Feature 37.1-3.
	Photograph #: 37.2-1_1 Photo Date: 8/25/20 Feature Number: 37.2-1 Direction: Southeast Notes: View of riparian vegetation for Feature 37.2-1.

Photograph	Information
	Photograph #: 37.2-1_2 Photo Date: 8/25/20 Feature Number: 37.2-1 Direction: Southwest Notes: View of culvert and riparian vegetation for Feature 37.2-1.
	Photograph #: 37.2-2_1 Photo Date: 8/27/20 Feature Number: 37.2-2 Direction: Northeast Notes: View of concrete channel with staining for Feature 37.2-2.

Photograph	Information
	Photograph #: 37.2-3_1 Photo Date: 8/27/20 Feature Number: 37.2-3 Direction: Southwest Notes: View of riparian vegetation for Feature 37.2-3.
	Photograph #: 37.9-1_1 Photo Date: 8/25/20 Feature Number: 37.9-1 Direction: Southeast Notes: View of concrete v-ditch for Feature 37.9-1.

Photograph	Information
	Photograph #: 37.9-2_1 Photo Date: 8/25/20 Feature Number: 37.9-2 Direction: Northwest Notes: View of concrete v-ditch for Feature 37.9-2.
	Photograph #:38.0-1_1 Photo Date: 8/25/20 Feature Number: 38.0-1 Direction: Southeast Notes: View of culvert for Feature 38.0-1.

Photograph	Information
	Photograph #: 38.0-2_1 Photo Date: 8/25/20 Feature Number: 38.0-2 Direction: Northeast Notes: View of concrete ditch for Feature 38.0-2.
	Photograph #: 38.0-3_1 Photo Date: 8/24/20 Feature Number: 38.0-3 Direction: Northeast Notes: View of concrete culvert for Feature 38.0-3.

Photograph	Information
	Photograph #: 38.0-3_2 Photo Date: 8/24/20 Feature Number: 38.0-3 Direction: Northeast Notes: View of rip-rap in channel for Feature 38.0-3.

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