JURISDICTIONAL DELINEATION REPORT RIVERSIDE TRANSMISSION RELIABILITY PROJECT

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Acronyms and Abbreviations

CDFW	California Department of Fish and Wildlife
CWA	Clean Water Act
DigAlert	Underground Service Alert of Southern California
FAC	Facultative
FACU	facultative upland
FACW	facultative wetland
FEMA	Federal Emergency Management Agency
GIS	geographic information system
HUC	hydrologic unit code
I-15	Interstate 15
JD study area	Jurisdictional Delineation study area
MLRA	Major Land Resource Area
NHD	national hydrography dataset
NI	no indicator
NO	no occurrence
NL	not listed
NRCS	Natural Resources Conservation Service
NWI	National Wetland Inventory
OBL	Obligate
OHWM	Ordinary High Water Mark
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
RPU	Riverside Public Utilities
RTRP	Riverside Transmission Reliability Project
RWQCB	Regional Water Quality Control Board
SCE	Southern California Edison
SSURGO	Soil Survey Geographic
SP	Sample Point
SWRCB	State Water Resources Control Board
TOB	top of bank

USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USGS	United States Geological Survey

Chapter 1
Introduction

ICF has conducted a routine-level delineation of jurisdictional waters and wetlands for Southern California Edison (SCE) pertaining to the proposed transmission line of the Riverside Transmission Reliability Project (RTRP, hereafter referred to as the project), which is located in Jurupa Valley, California (Figure 1; all figures are located in Attachment 1). The purpose of this delineation was to identify the extent of federal and state jurisdiction within the jurisdictional delineation study area (JD study area) pursuant to Sections 401 and 404 of the federal Clean Water Act (CWA), as well as Section 13260 of the state Porter-Cologne Water Quality Control Act (Porter-Cologne Act) and Section 1602 of the California Fish and Game Code.

Section 404 of the CWA covers waters of the United States as well as federal wetlands and is regulated by the U.S. Army Corps of Engineers (USACE). Under Section 401 of the CWA, the Regional Water Quality Control Board (RWQCB) regulates at the state level all activities that are regulated at the federal level by the USACE. The RWQCB or State Water Resources Control Board (SWRCB) may also regulate activities affecting non-federal waters and wetlands (e.g., isolated features) under the Porter-Cologne Act. Section 1602 of the California Fish and Game Code is regulated by the California Department of Fish and Wildlife (CDFW) and covers aquatic features, which include lakes or streambeds with a defined bed and bank plus any adjacent riparian vegetation.

The information and results presented herein document the investigation, best professional judgment, and conclusions of ICF. It is correct and complete to the best of ICF's knowledge. However, all jurisdictional delineations should be considered preliminary until reviewed and approved/determined by the regulatory agencies.

1.1 Project Purpose

The proposed project is a joint project with SCE and Riverside Public Utilities (RPU) to provide a second 230kV transmission line connection to RPU's transmission system. The purpose of the proposed project is to increase the reliability of the RPU grid.

1.2 Project Location

The proposed project occurs within the Jurupa Valley area in northwestern Riverside County, California (Figure 1). The project consists of two segments that are oriented north-south and east-west. The north-south segment runs along the eastern side of Interstate 15 (I-15) from just north of the intersection at Cantu-Galleano Ranch Road and Wineville Avenue south to 68th Street. The project then makes a 90 degree turn east. The east-west segment is located to the south of the Santa Ana River, with the eastern terminus occurring just east of Wilderness Avenue and the western terminus just east of I-15 at Pats Ranch Road. The JD study area is located in the United States Geological Survey (USGS) 7.5-minute Guasti, Corona North, and Riverside West topographic quadrangles (Figure 2; USGS 1980, 1981). The latitude and longitude for the center of the project are 33.960949 and -117.503172, respectively.

1.3 Project Description

SCE proposes to construct approximately 10 miles of new 230kV transmission line along the project alignment (Figure 3). Towers will be built throughout the alignment connecting the transmission lines, with corresponding work areas beneath each tower structure. Existing access roads will be used to access the tower construction areas, as well as drive and crush areas where work vehicles and equipment will drive over vegetation to access power poles and towers. In addition, two separate areas not connected to the project construction area will be utilized for temporary staging areas and yards to store equipment and vehicles during the construction phase of the project.

Chapter 2
Methods

2.1 Project Research

Prior to the field visit, a 100-foot-scale (1 inch = 100 feet) aerial photograph of the site was obtained and compared with the USGS 7.5-minute topographic Guasti, Corona North, and Riverside West quadrangle maps (USGS 1980, 1981) and Google Earth (Google, Inc. 2016) to observe vegetation types, topographic changes, and visible drainage patterns associated with the JD study area. In addition, the National Wetland Inventory (NWI) (USFWS 2017) was reviewed to identify mapped wetlands that occur within the JD study area. A map depicting the JD study area in relation to the Federal Emergency Management Agency (FEMA) 100-year and 200-year flood zones is provided in Figure 4, a map showing the national hydrography dataset (NHD) drainages and NWI wetlands is provided in Figure 5, and a map illustrating the watersheds is provided in Figure 6.

2.2 Field Investigation

A jurisdictional waters and wetland delineation was conducted by ICF biologists Marisa Flores and Dennis Miller on May 10 and 18, 2017 and Paul Schwartz and Kristin Klinefelter on May 10 and 11, 2017.

The JD study area consists of the combined limits of the following:

- The general disturbance area for stringing, existing poles, and proposed structure work areas;
- A maximum 250-foot wide buffer of the transmission line alignment[1];
- Existing dirt access roads and a 10-foot buffer;
- Drive and crush access routes and a 20-foot wide buffer; and
- The work area necessary for the Marshalling Yards.

The survey was conducted on foot, and jurisdictional limits were recorded using high-resolution aerial photographs (1 inch = 100 feet) and the Collector geographic information system (GIS) application on an iPad with sub-meter accurate external receiver. Existing conditions were documented in field notes and site photographs.

In order to comply with the Underground Service Alert of Southern California (DigAlert) requirements, Marisa Flores and Dennis Miller conducted an initial investigation of the JD study area on May 9, 2017 to identify areas where digging may be necessary for wetland soil sampling. Once sample areas were identified, the location was staked and coordinates were recorded with the iPad. DigAlert was contacted and a ticket number obtained prior to any soil sampling of the JD study area.

[1]The survey area buffer used for the transmission line alignment was reduced in some locations so that it did not extend beyond the disturbance area for the proposed structure work. In addition, because of increased developed areas west of the Santa Ana River, survey area was pulled back so that it did not encroach into the Caltrans right-of-way or was limited by the width of the roadway along Pats Ranch Road and 68th Street.

2.2.1 USACE Jurisdiction

Potential waters of the United States and wetlands were delineated using methods established in the *Wetland Delineation Manual* (Environmental Laboratory 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008a), 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 2008b). Non-wetland waters were delineated based on the presence of OHWM indicators, whereas the following three criteria must be fulfilled in order to classify an area as a wetland water: (1) a predominance of hydrophytic vegetation, (2) the presence of hydric soils, and (3) the presence of wetland hydrology. Details of the application of these criteria are provided below.

- **Hydrophytic Vegetation:23** The hydrophytic vegetation criterion is satisfied at a location if greater than 50% of all the dominant species present within the vegetation unit have a wetland indicator status of obligate (OBL), facultative wetland (FACW), or facultative (FAC) (Environmental Laboratory 1987). An OBL indicator status refers to plants that almost always occur in wetlands. A FACW indicator status refers to plants that usually occur in wetlands but are occasionally found elsewhere. A FAC indicator status refers to plants that are equally likely to occur in wetlands or elsewhere. A no indicator (NI) status designates that insufficient information was available to determine an indicator status. A no occurrence (NO) status indicates that the species does not occur in the region; when a plant with an NO status is found within a region, it usually indicates that the plant is ornamental. Other indicators are NL (not listed) and FACU (facultative upland). NL plant species are considered Upland for wetland delineation purposes. The wetland indicator status used for this report follows the *National Wetland Plant List* (Lichvar et al. 2016).
- **Hydric Soils:** The definition of a hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (USDA/NRCS 1994). This determination is made based on various field indicators detailed in the *Arid West Supplement* and the *Field Indicators of Hydric Soils in the United States* (Version 8.0) (USDA/NRCS 2016).
- **Wetland Hydrology:** Wetland hydrology is determined using indicators of inundation or saturation (flooding, ponding, or tidally influenced) detailed in the *Wetland Delineation Manual* and the *Arid West Supplement*.

Within the JD study area, soil pits were dug to examine soil color and texture and determine the wetland boundary. Wetland Determination Data Forms are included with this document as Attachment 3.

2.2.2 RWQCB/SWRCB Jurisdiction

Evaluation of state jurisdiction followed guidance from Section 401 of the CWA and typically follows the same jurisdictional areas as USACE. In addition, the JD study area was reviewed for resources potentially regulated under the Porter-Cologne Act (i.e., isolated features).

2.2.3 CDFW Jurisdiction

CDFW jurisdiction typically includes water features with a defined bed and bank. Evaluation of potentially jurisdictional areas followed the guidance of standard practices by CDFW personnel. Briefly, CDFW jurisdiction was delineated by measuring outer width and length boundaries of

potentially jurisdictional areas (lakes or streambeds), consisting of the greater of either the top of bank (TOB) measurement or the extent of associated riparian or wetland vegetation.

Chapter 3
Environmental Setting

3.1 Topography and Land Use

The topography within the JD study area is relatively flat, with graded developed areas and open areas surrounding most of the project. It gently slopes down from northeast to southwest with elevations ranging from approximately 610 to 790 feet above mean sea level.

Land use in the local vicinity of the JD study area is composed primarily of residential and commercial development with associated public infrastructure, and to a lesser extent, industrial complexes, undeveloped open space, orchards, a golf course, and a water treatment plant. The Santa Ana River Trail traverses along and adjacent to the east-west segment of the project and is used for recreational uses, including hiking, biking, and horseback riding.

3.2 Hydrology

3.2.1 Precipitation

Based on the Riverside Municipal Airport weather station located 3 miles southeast of the central portion of the JD study area, total estimated precipitation within the last year was approximately 13.37 inches (Table 3-1, NWS 2017). The weather station is located to the east of Van Buren Boulevard between Central Avenue and Arlington Avenue at Latitude 33.950731, Longitude -117.445904.

Table 3-1. Rainfall Data Summary for the JD study area (inches)

Month	May 2016	Jun 2016	Jul 2016	Aug 2016	Sep 2016	Oct 2016	Nov 2016	Dec 2016	Jan 2017	Feb 2017	Mar 2017	Apr 2017	**Total**
Total	0.18	0.00	0.00	0.00	0.00	0.96	0.96	3.34	5.48	2.19	0.16	0.10	**13.37**

*Data source: National Weather Service, Riverside Municipal Airport Station. Available: http://w2.weather.gov/climate/xmacis.php?wfo=sgx. Accessed May 2017. Located approximately 3 miles southeast of the central portion of the JD study area.

3.2.2 Watershed and Hydrologic Features

The JD study area is within the Santa Ana Watershed (USGS HUC 8: 18070203) (Figure 6). The Santa Ana River Watershed covers 2,800 square miles and drains from the San Bernardino Mountains before passing through San Bernardino, Riverside, and Orange counties for approximately 74 miles before emptying into the Pacific Ocean. The Middle Santa Ana River Sub-watershed and Chino Creek Subwatershed occur within the Santa Ana Watershed. Major streams within the Middle Santa Ana River and Chino Creek Sub-watersheds include Santa Ana River, Day Creek, East Etiwanda Creek, and several constructed flood-control channels. The majority of the hydrology in the project vicinity is associated with the Santa Ana River (Figure 5). The dominant land uses in the Middle Santa Ana

River and Chino Creek Sub-watersheds are urban (including residential, commercial, and industrial), with undeveloped lots and open space scattered throughout the area.

3.3 Soils

3.3.1 Soil Series

The Natural Resources Conservation Service (NRCS) has mapped the following soil series as occurring within the JD study area based on the Soil Survey Geographic (SSURGO) database (USDA/NRCS 2017a) (Figure 7): Altamont, Anza, Arlington, Buchenau, Cajalco, Cieneba, Delhi, Dello, Fallbrook, Gorgonio, Grangeville, Greenfield, Hanford, Hilmar, Las Posas, Madera, Monserate, Placentia, Porterville, Ramona, Tujunga, and Vista. Terrace escarpments also occur within the JD study area.

A description of the soil series included within the SSURGO mapping units is provided below based on the official soil descriptions and hydric soil classifications provided by the U.S. Department of Agriculture (USDA) (USDA/NRCS 2017b, 2017c).

3.3.1.1 Altamont

The Altamont series consist of deep, well-drained soils that formed in material weathered from fine-grained sandstone and shale. Runoff is medium to very high, with slow permeability once cracks swell shut. Altamont series occur on uplands, hills and mountains, have slopes of 0 to 75%, and occur at elevations of 100 to 4,480 feet. Altamont series soils are extensive and are found in the Diablo Ranges in the coastal mountain ranges in central and southern California and in the Sutter Buttes.

The Altamont series is not identified as a hydric soil for the Western Riverside Area soil survey area. Within the JD study area, this soil series occurs as Altamont clay, 5 to 15 percent slopes.

3.3.1.2 Anza

The Anza series consist of well-drained soils of alluvium that derived from igneous and metamorphic rock. Runoff is medium. The Anza series occur on alluvial fans.

The Anza series is not identified as a hydric soil for the Western Riverside Area soil survey area. Within the JD study area, this soil series occurs as Anza loam, 2 to 8 percent slopes.

3.3.1.3 Arlington

The Arlington series consist of well-drained soils of alluvium that derived from granite. Runoff is medium, with slow permeability. Arlington series occur on alluvial fans and terraces, are nearly level to strongly sloping, and occur at elevations of 400 to 2,000 feet. Arlington series soils are moderately extensive and are found in the coastal and intermediate valleys of southern California.

The Arlington series is not identified as a hydric soil for the Western Riverside Area soil survey area. Within the JD study area, this soil series occurs as Arlington fine sandy loam, deep, 2 to 8 percent slopes; Arlington fine sandy loam, deep, 8 to 15 percent slopes; Arlington loam, deep, 0 to 5 percent slopes; and Arlington loam, deep, 5 to 15 percent slopes.

3.3.1.4 Buchenau

The Buchenau series consist of well to moderately well-drained soils that formed from alluvium derived from mixed sources. Runoff is medium to very slow, with moderately slow permeability to the hardpan, then very slow permeability. Buchenau series occur on small alluvial fans formed from metasedimentary rocks at elevations of 300 to 1,500 feet. Buchenau series soils are inextensive, comprising approximately 6,000 acres, and are found on the east side of the San Joaquin Valley and intermountain valleys of southern California.

The Buchenau series is not identified as a hydric soil for the Western Riverside Area soil survey area. Within the JD study area, this soil series occurs as Buchenau loam, slightly saline-alkali, 2 to 8 percent slopes.

3.3.1.5 Cajalco

The Cajalco series consist of well-drained soils formed in deeply weathered, basic igneous rocks. Runoff is medium, with moderate permeability. Cajalco series occur on gently sloping to steep uplands at elevations less than 3,500 feet. Cajalco series soils are moderately extensive and are found in the foothills and interior valleys of southern California.

The Cajalco series is not identified as a hydric soil for the Western Riverside Area soil survey area. Within the JD study area, this soil series occurs as Cajalco fine sandy loam, 8 to 15 percent slopes, eroded, and Cajalco fine sandy loam, 15 to 35 percent slopes, eroded.

3.3.1.6 Cieneba

The Cieneba series consist of very shallow and shallow, somewhat excessively drained soils that formed in material weathered from granitic rock. Runoff is low to high, with moderately rapid permeability. Cieneba series occur on hills and mountains, have slopes of 9 to 85%, and occur at elevations of 500 to 4,000 feet. Cieneba series soils are extensive and are found in the coastal mountain ranges in central and southern California and in the foothills of the Sierra Nevada.

The Cieneba series is not identified as a hydric soil for the Western Riverside Area soil survey area. Within the JD study area, this soil series occurs as Cieneba sandy loam, 15 to 50% slopes, eroded.

3.3.1.7 Delhi

The Delhi soil series is a very deep, somewhat excessively drained soil that is formed on wind modified alluvium on floodplains, alluvial fans, and terraces. The Delhi soil series has negligible to slow runoff, and rapid permeability. Delhi series occur on floodplains, alluvial fans, and terraces, have slopes of 0 to 15%, and occur at elevations of 25 to 1,400 feet. Delhi series soils are extensive in Major Land Resource Area (MLRA) 17 and are found on the east side of the San Joaquin Valley, in the central valley, and intermountain valleys in the western part of southern California.

The Delhi series is identified as a hydric soil for the Western Riverside Area soil survey area. Within the JD study area, this soil series is characterized Delhi fine sand, 2 to 15 percent slopes, wind-eroded, and Delhi loamy fine sand, 0 to 2 percent slopes.

3.3.1.8 Dello

The Dello series consist of very deep, very poorly drained soils that formed in alluvium from granitic rock sources. Runoff is slow, with rapid permeability. Dello series occur on wind-modified old alluvial fans in small depressions, have slopes of 0 to 2%, and occur at elevations 10 feet below sea level to about 500 feet. Dello series soils are extensive in MLRA 16 and 17 and are found in the San Joaquin Valley, Sacramento-San Joaquin Delta and intermountain valleys of southern California.

The Dello series is identified as a hydric soil for the Western Riverside Area soil survey area. Within the JD study area, this soil series occurs as Dello loamy sand, 0 to 5 percent slopes, and Dello loamy sand, poorly drained, 0 to 2 percent slopes.

3.3.1.9 Fallbrook

The Fallbrook series consist of deep, well-drained soils that formed in material weathered from granitic rocks. Runoff is medium to very rapid, with moderately slow permeability. Fallbrook series occur on rolling and round hills, with slopes ranging from 5 to 75%, at elevations of 200 to 3,000 feet, or as high as 3,500 feet on south-facing slopes. Fallbrook series soils are extensive and are found in the foothills on the east side of the San Joaquin Valley and the foothills in the western part of southern California.

The Fallbrook series is not identified as a hydric soil for the Western Riverside Area soil survey area. Within the JD study area, this soil series occurs as Fallbrook sandy loam, 8 to 15% slopes, eroded, and Fallbrook fine sandy loam, 2 to 8% slopes, eroded.

3.3.1.10 Gorgonio

The Gorgonio soil series are characterized as somewhat excessively drained, with slow or medium runoff and rapid permeability. They occur on nearly level to moderately sloping alluvial fans at elevations from 20 to 3,000 feet. Gorgonio series soils are moderately extensive and are found near the mountains in southern and central coast areas of California.

The Gorgonio series is identified as a hydric soil for the Western Riverside Area soil survey area. Within the JD study area, this soil series occurs as Gorgonio loamy sand, 0 to 8 percent slopes, and Gorgonio loamy sand, deep, 2 to 8 percent slopes.

3.3.1.11 Grangeville

The Grangeville series consist of very deep, somewhat poorly drained soils that formed in moderate coarse textured alluvium dominantly from granitic rock sources. Runoff is negligible to very low, with moderately rapid permeability and moderate permeability in saline-sodic phases. Grangeville series occur on alluvial fans and floodplains, have slopes of 0 to 2%, and occur at elevations of 0 to 1,800 feet. Grangeville series soils are extensive in MLRA 17 and 19 and are found in the east side of the San Joaquin Valley and intermountain valleys in the western part of southern California.

The Grangeville series is identified as a hydric soil for the Western Riverside Area soil survey area. Within the JD study area, this soil series occurs as Grangeville loamy fine sand, drained, 0 to 5 percent slopes, and Grangeville fine sandy loam, poorly drained, saline-alkali, 0 to 5 percent slopes.

3.3.1.12 Greenfield

The Greenfield series consist of deep, well-drained soils that formed in moderately coarse and coarse textured alluvium derived from granitic and mixed rock sources. Runoff is slow to medium, with moderately rapid permeability. Greenfield series occur on alluvial fans and terraces, have slopes of 0 to 30%, and occur at elevations of 100 to 3,500 feet. Greenfield series soils are extensive and are found in the interior and coastal valleys of central and southern California.

The Greenfield series is not identified as a hydric soil for the Western Riverside Area soil survey area. Within the JD study area, this soil series occurs as Greenfield sandy loam, 2 to 8 percent slopes, eroded.

3.3.1.13 Hanford

The Hanford series consist of very deep, well-drained soils that formed in deep, moderately coarse textured alluvium dominantly from granite and other quartz bearing rocks of similar texture. Runoff is negligible to low, with moderately rapid permeability. Hanford series occur on stream bottoms, floodplains, and alluvial fans, have slopes of 0 to 15%, and occur at elevations of 150 to 3,500 feet. Hanford series soils are extensive in MLRA 17 and are widely distributed in the San Joaquin Valley and in the valleys of central and southern California.

The Hanford series is identified as a hydric soil for the Western Riverside Area soil survey area. Within the JD study area, this soil series occurs as Hanford coarse sandy loam, 0 to 2 percent slopes; Hanford coarse sandy loam, 2 to 8 percent slopes; and Hanford coarse sandy loam, 8 to 15 percent slopes, eroded.

3.3.1.14 Hilmar

The Hilmar series consist of somewhat poorly drained soils that are formed in alluvium from granitic rock sources. Runoff is slow, with rapid permeability to slow permeability. Hilmar series occur near basins, are nearly level, and occur at elevations of 300 to 900 feet. Hilmar series soils are moderately extensive and are found in the east side of the San Joaquin Valley and the intermountain valleys in the western part of southern California.

The Hilmar series is not identified as a hydric soil for the Western Riverside Area soil survey area. Within the JD study area, this soil series occurs as Hilmar loamy sand, 0 to 2 percent slopes, eroded; Hilmar loamy very fine sand, 0 to 2 percent slopes; and Hilmar loamy very fine sand, 2 to 8 percent slopes.

3.3.1.15 Las Posas

The Las Posas series consist of moderately deep, well-drained soils that formed in material weathered from basic igneous rocks. Runoff is medium to rapid, with slow permeability. Las Posas series occur on mountainous uplands, have slopes of 5 to 50%, and occur at elevations of 200 to 3,000 feet. Las Posas series soils are moderately extensive and are found in the foothills of southern California and the Sierra Nevada.

The Las Posas series is not identified as a hydric soil for the Western Riverside Area soil survey area. Within the JD study area, this soil series occurs as Las Posas loam, 2 to 8 percent slopes.

3.3.1.16 Madera

The Madera series consist of moderately deep to hardpan, well or moderately well-drained soils that formed in old alluvium derived from granitic rock sources. Runoff is medium to very slow, with very slow permeability. Madera series occur on undulating low terraces, have slopes of 0 to 9%, and occur at elevations of 10 to 250 feet. Madera series soils are extensive in MLRA 17 and are found in the eastern side of the Sacramento and San Joaquin valleys.

The Madera series is identified as a hydric soil for the Western Riverside Area soil survey area. Within the JD study area, this soil series occurs as Madera fine sandy loam, shallow, 2 to 8 percent slopes, eroded.

3.3.1.17 Monserate

The Monserate series consist of moderately well to well-drained soils that formed in alluvium derived principally from granitic rocks. Runoff is slow to rapid, with moderately slow permeability in the B2t horizon and very slow permeability in the duripan. Monserate series occur on nearly level to moderately steep old dissected terraces and fans at elevations of 700 to 2,500 feet. Monserate series soils are moderately extensive and are found in the interior valleys in the western part of southern California.

The Monserate series is not identified as a hydric soil for the Western Riverside Area soil survey area. Within the JD study area, this soil series occurs as Monserate sandy loam, 0 to 5 percent slopes, and Monserate sandy loam, 8 to 15 percent slopes, eroded.

3.3.1.18 Placentia

The Placentia series consist of well or moderately well-drained soils that formed in alluvium from granite and other rocks of similar composition and texture. Runoff is slow to rapid, with very slow permeability. Placentia series are nearly level to moderately sloping and are on fans and terraces at elevations of 50 to 2,500 feet. Placentia series soils are extensive and are found in the Salinas Valley and coastal parts of southern California.

The Placentia series is identified as a hydric soil for the Western Riverside Area soil survey area. Within the JD study area, this soil series occurs as Placentia fine sandy loam, 0 to 5 percent slopes.

3.3.1.19 Porterville

The Porterville series consist of deep, well-drained soils that formed in fine textured alluvial material from basic and metabasic igneous rock. Runoff is very slow to rapid, with slow permeability. Porterville series occur on fans and foothills, have slopes of 0 to 15%, and occur at elevations of less than 2,000 feet in the lower valleys and 4,000 to 4,500 feet in the higher valleys. Porterville series soils are moderately extensive and are found at the edges of the great valley and in intermountain valleys of southern California.

This soil series is not identified as a hydric soil for the Western Riverside Area soil survey area. Within the JD study area, this soil series occurs as Porterville clay, moderately deep, slightly saline-alkali, 0 to 5 percent slopes.

3.3.1.20 Ramona

The Ramona series consist of well-drained soils that formed in alluvium derived mostly from granitic and related rock sources. Runoff is slow to rapid, with moderately slow permeability. Ramona series occur on terraces and fans, are nearly level to moderately steep, and occur at elevations of 250 to 3,500 feet. Ramona series soils are extensive and are found in the interior valleys of central and the western part of southern California.

The Ramona series is not identified as a hydric soil for the Western Riverside Area soil survey area. Within the JD study area, this soil series occurs as Ramona sandy loam, 2 to 5 percent slopes, eroded; Ramona sandy loam, 0 to 5 percent slopes, severely eroded; Ramona sandy loam, 8 to 15 percent slopes, eroded; Ramona sandy loam, 8 to 15 percent slopes, severely eroded; and Ramona very fine sandy loam, 0 to 8 percent slopes, eroded.

3.3.1.21 Tujunga

The Tujunga series consist of very deep, somewhat excessively drained soils that formed in alluvium from granitic sources. Runoff is negligible to low, with high saturated hydraulic conductivity. Tujunga series occur on alluvial fans and floodplains, including urban areas, have slopes of 0 to 9%, and occur at elevations of 6 to 1,970 feet. Tujunga series soils are extensive and are found in the central and southern coastal plains and valleys in MLRA 14 and 19.

The Tujunga series is identified as a hydric soil for the Western Riverside Area soil survey area. Within the JD study area, this soil series occurs as Tujunga gravelly loamy sand, 0 to 8 percent slopes.

3.3.1.22 Vista

The Vista series consist of moderately deep, well-drained soils that formed in material weathered from decomposed granitic rocks. Runoff is slow to rapid, with moderately rapid permeability. Vista series occur on hills and mountainous uplands, have slopes of 2 to 75%, and occur at elevations of 400 to 3,900 feet within southern California. Vista series soils are extensive and are located in mountains of southern California and Sierra Nevada foothills.

The Vista series is not identified as a hydric soil for the Western Riverside Area soil survey area. Within the JD study area, this soil series occurs as Vista coarse sandy loam, 8 to 15% slopes, eroded, and Vista coarse sandy loam, 15 to 35% slopes, eroded.

Chapter 4
Jurisdictional Delineation Results

The following identifies the delineated features and their expected jurisdictional status. More detailed information is provided in the attachments to this document.

- Attachment 1 – Figures
- Attachment 2 – Photo Log
- Attachment 3 – Wetland Determination Forms

4.1 Jurisdictional Delineation Results

A total of 17 features were delineated within the JD study area, including earthen channels, concrete channels, seasonal wet depressions, and swales and erosional features. These features along with the agency jurisdiction for wetlands and non-wetlands are summarized in Table 4-1, below, are described in detail in Table 4-2, and are illustrated on Figure 8.

Table 4-1. Summary of the Jurisdictional Delineation Results

Feature ID	USACE/RWQCB (acres)			RWQCB Only (acres)			CDFW (acres)		
	Non-Wetland	Wetland	Total	Non-Wetland	Wetland	Total	Associated Riparian	Streambed	Total
Feature 0001	0.025	---	**0.025**	---	---	**N/A**	---	0.068	**0.068**
Feature 0002 (Santa Ana River)	0.762	1.215	**1.977**	---	---	**N/A**	6.092	4.277	**10.369**
Feature 0003	0.051	---	**0.051**	---	---	**N/A**	0.257	<0.001	**0.257**
Feature 0004	0.126	---	**0.126**	---	---	**N/A**	0.116	0.203	**0.319**
Feature 0005	---	---	**N/A**	---	0.064	**0.064**	---	---	**N/A**
Feature 0006	0.012	---	**0.012**	---	---	**N/A**	---	0.195	**0.195**
Feature 0007	---	---	**N/A**	0.039	---	**0.039**	---	---	**N/A**
Feature 0008	---	---	**N/A**	0.026	---	**0.026**	---	---	**N/A**
Feature 0009	0.011	---	**0.011**	0.011	---	**0.011**	---	0.057	**0.057**
Feature 0010	---	---	**N/A**	0.039	---	**0.039**	---	---	**N/A**
Feature 0011	0.028	---	**0.028**	---	---	**N/A**	0.224	0.010	**0.234**
Feature 0012	0.162	---	**0.162**	---	---	**N/A**	0.037	0.260	**0.297**
Feature 0013	0.821	---	**0.821**	---	---	**N/A**	---	1.412	**1.412**
Feature 0014	0.535	0.163	**0.698**	---	---	**N/A**	0.530	0.463	**0.993**
Feature 0015	0.025	---	**0.025**	---	---	**N/A**	0.021	0.113	**0.134**

Feature ID	USACE/RWQCB (acres)			RWQCB Only (acres)			CDFW (acres)		
	Non-Wetland	Wetland	Total	Non-Wetland	Wetland	Total	Associated Riparian	Streambed	Total
Feature 0016	0.022	---	**0.022**	---	---	**N/A**	---	0.088	**0.088**
Feature 0017	0.001	---	**0.001**	---	---	**N/A**	---	0.005	**0.005**
Total	**2.581**	**1.473**	**3.959**	**0.104**	**0.064**	**0.179**	**7.210**	**7.218**	**14.428**

4.1.1 Earthen Channels

Twelve of the 17 features in the JD study area are earthen-bottom channels that receive input from the surrounding uplands and adjacent residential land that flow into the Santa Ana River (Table 4-1 and Table 4-2). Indicators used to delineate the OHWM commonly included terracing, sediment deposition, sediment sorting, the 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. The TOB and riparian vegetation was used to delineate CDFW jurisdiction. These earthen channels would be jurisdictional under the USACE, RWQCB, and CDFW. A brief description of each feature is provided below.

Feature 0002 (Santa Ana River)

The Santa Ana River (Feature 0002) flows from northeast to southwest across the JD study area and conveys precipitation, and urban, agricultural, and mountain runoff within Santa Ana River Watershed. This feature is identified as a blue-line stream on USGS mapping. The main channel of the river is open water, with wetlands occurring on the banks of the river and a floodplain vegetated with southern riparian scrub, southern willow scrub, non-native riparian woodland, mulefat scrub, and non-native grasslands. The dominant riparian vegetation documented in the Santa Ana River was stinging nettle (*Urtica dioica*, FAC), blackberry (*Rubus ursinus*, FACU), poison oak (*Toxicodendron diversilobum*, FAC), giant reed (*Arundo donax*, FACW), cattail (*Typha* sp., OBL), Gooding's black willow (*Salix gooddingii*, FACW), and black elderberry ((*Sambucus nigra*, FAC). Hydrophytic vegetation, hydric soils, and wetland hydrology indicators were present at Sample Point (SP) 6. At SP-7, wetland hydrology indicators were not observed, so no soil sampling was conducted and this outpoint determined the wetland boundary. Due to density of riparian vegetation and the high potential to disrupt nesting bird activity on the eastern side of the Santa Ana River, it was assumed that wetlands are also present where hydrology indicators and hydrophytic vegetation are present; therefore no additional sampling was conducted.

Feature 0003

Feature 0003 is an earthen channel that drains precipitation from uplands into the Santa Ana River (Feature 0002). Ephemeral flows drain from south to north. The upstream end of the drainage has two low flow channels which drain into a single downstream channel. Feature 0003 is vegetated by southern willow scrub and is dominated by Gooding's black willow (FACW) and black elderberry (FAC), hemlock (*Conium maculatum*, FAC). SP-5 was taken at Feature 0003 and was determined not to contain a wetland due to the absence of wetland hydrology indicators and hydric soils.

Feature 0004

Feature 0004 is an earthen channel that drains precipitation from uplands into the Santa Ana River (Feature 0002). Ephemeral flows drain from south to north. This feature is vegetated with a

disturbed mulefat scrub and is comprised of mulefat and tree tobacco (*Nicotiana glauca*, FAC). SP-4 was taken at Feature 0004 and was determined not to contain a wetland, due to the absence of wetland hydrology indicators and hydric soils.

Feature 0006

This earthen channel conveys precipitation from uplands and urban runoff from south to north into the Santa Ana River (Feature 0002). Vegetation in the channel is comprised of non-native riparian woodland and is dominated by black elderberry, palo verde (*Parkinsonia* sp.), summer mustard (*Hirschfeldia incana*, NL), and black mustard (*Brassica nigra*, NL). Due to the lack of hydrophytic vegetation, no sample points were taken for wetlands.

Feature 0009

This earthen channel originates at a culvert and riprap at the south end and conveys local runoff and precipitation from uplands from south to north towards the Santa Ana River (Feature 0002). At the southern end of this feature, there is a fence and on the north side of the fence the feature no longer has discernible OHWM or top of bank indicators. Instead, it appears flows from Feature 0009 drain into a black pipe with an approximately 12" diameter, and this pipe has been placed at the toe of the slope. It was determined that this pipe was not jurisdictional. Vegetation within Feature 0009 is ruderal and dominated by castor bean (FACU), summer mustard (NL), black mustard (NL), tree tobacco (FAC), and black elderberry (FAC). Due to the lack of hydrophytic vegetation, no sample points were taken for wetlands.

Feature 0011

Feature 0011 is an earthen ephemeral feature that conveys urban runoff and precipitation from uplands from south to north towards the Santa Ana River (Feature 0002). The channel is deeply incised with very little vegetation documented in the channel bottom. The channel occurs within a riparian scrub community. Riparian vegetation located on the banks of the channel were comprised of stinging nettle (FAC), Gooding's black willow (FACW), and wild desert grape (*Vitis girdiana*, FAC). SP-2 determined that this feature was not a wetland due to lack of hydrophytic vegetation, hydric soils and wetland hydrology indicators within the channel.

Feature 0012

This earthen channel conveys flows from urban runoff and precipitation from uplands from southeast to northwest towards the Santa Ana River (Feature 0002). The western portion of the channel within the JD study area, directly adjacent to Feature 0011, was deeply incised and comprised of wild desert grape (FAC) and stinging nettle (FAC). The eastern portion of the channel was vegetated with mulefat scrub and dominated by mulefat (FACW), giant reed (FACW), and poison hemlock on the banks. Water was present in this feature during the site visit on May 10, and was likely present from dewatering of the construction site that occurs upstream (south) of the feature. The portion of the feature on the south side of the fenceline within the construction area was not accessible. SP-1 determined that Feature 0012 was not a wetland based on lack of hydric soils indicators.

Feature 0013

Feature 0013 is an earthen channel that has been modified by construction activities, including a portion converted to basins and the majority of the channel lacks riparian vegetation. Small amounts of mulefat (FACW), castor bean (FACU), and curly dock (*Rumex crispus*, FAC), were noted in the

channel but the majority of the vegetation in the channel has been removed by construction. This feature was not accessible because it occurs within an active construction area.

Feature 0014

Feature 0014 is a perennial channel which conveys urban runoff and stormwater to the Santa Ana River (Feature 0002). The feature is comprised of southern riparian scrub dominated by Gooding's black willow (FACW), shining willow (*Salix lasiondra*, FACW), mulefat (FACW), and cattails (OBL). Wetlands were mapped along the edge of the channel. No wetland sampling was conducted due to presence of homeless encampments in the vicinity; however this feature was delineated by ICF in November 2016 and the results of the delineation for Feature 0014 are included in Figure 8. Wetland sampling conducted just outside of the JD study area in November 2016 showed a predominance of hydrophytic vegetation, hydric soils (redox dark surface), and wetland hydrology for Feature 0014.

Feature 0015

Feature 0015 is an ephemeral channel that conveys urban runoff from south to north towards the Santa Ana River (Feature 0002). Ephemeral flows exit a large culvert with riprap at the upstream end and these flows settle into a basin with an inlet overflow drain pipe on the south side of the Santa Ana River Trail. Any overflow exits through a culvert just to the north of the Santa Ana River Trail. The vegetation in the channel is ruderal and dominated by dense tocalote (*Centaurea melatensis*, NL) and black mustard. The OHWM and TOB was only visible for a portion of the southern end of channel due to the dense vegetation growing in the channel. The northern end of the channel was mostly unvegetated with the same ruderal vegetation present at the TOB. Due to the lack of hydrophytic vegetation, no sample points were taken for wetlands.

Feature 0016

This ephemeral channel conveys precipitation from uplands from south to north towards the Santa Ana River (Feature 0002). Vegetation within the channel is ruderal and dominated by castor bean (FACU), black mustard (NL), tree tobacco (FAC), and black elderberry (FAC). Due to the lack of hydrophytic vegetation, no sample points were taken for wetlands.

Feature 0017

Feature 0017 originates outside of the JD study area in uplands and only a few feet of the feature occurs within the JD study area. The feature captures precipitation that drains from uplands. Feature 0017 is deeply incised and full of heavy debris. Vegetation is classified as ruderal and there were a few scattered tree tobacco (FAC) inside of the feature. Due to inaccessibility into this channel and the heavy debris, delineators could not confirm there was a culvert at the terminus of the feature that would convey flows from south to north to the Santa Ana River.

4.1.2 Concrete Channels

Feature 0001

Only one feature mapped within the JD study area is a maintained concrete-lined flood-control channel (Feature 0001). It occurs within the construction staging area along Harrel Street. The channel runs north-south and passes under Harrel Street. The feature is a concrete trapezoidal channel, which is constructed in uplands to convey ephemeral flows to prevent erosion and facilitate drainage. It is not identified as a blue-line feature. Some low flow was present during field surveys

(Photo ID 0001, Attachment 2). The feature did not contain sediment buildup that would allow vegetation growth and no riparian habitat or wetlands were present, although an individual tall flat sedge (*Cyperus eragrostis*, FACW) was observed within the cracks in the concrete. OHWM indicators were based on the presence of water staining and sediment/debris deposition along the bottom of the channel invert. The CDFW width was measured at the top of bank.

4.1.3 Seasonal Wet Depression

Feature 0005

There is one area within the JD study area comprised of an isolated seasonal wet depression (Feature 0005). This depressional area formed from old road ruts and is located near the center of the east-west segment of the JD study area just south of the Santa Ana River Trail. The location had hydrophytic vegetation indicators and wetland hydrology present (Attachment 3; SP-3). Wet and dry, cracked soils occurred, with ponded areas containing mulefat and curly dock. Hydric soils were assumed to be present due to those conditions, but sampling was not conducted to avoid potential impacts to potential habitat for listed fairy shrimp. The wetland was of low quality due to off-road vehicular disturbances on the dirt road directly adjacent to the wetland and due to the feature having formed from disturbed soils. For the purpose of water permitting, this feature is being presumed an isolated wetland.

4.1.4 Swales and Erosional Features

Features 0007, 0008 and 0010

Three of the 17 features in the JD study area are swales and erosional features that occur in uplands along the sides of the Santa Ana River Trail (Features 0007, 0008, and 0010). Swales were armored with riprap, and although a discernable OHWM or bed and bank were measured based on the width of the riprap, these armored swales were constructed to convey flows and prevent erosion along the edges of the Santa Ana River Trail. The swales capture runoff from upland areas preventing erosion of the trail. Features 0007 and 0008 convey surface flows into a culvert towards Feature 0009, and Feature 0010 conveys surface flows towards Feature 0011. Vegetation associated with these features included castor bean, summer mustard, and black mustard. Within the JD study area, these features are anticipated to be RWQCB jurisdictional only; they are not considered USACE or CDFW jurisdictional because the features are man-made swales.

4.1.5 Non-Jurisdictional Features

Several non-jurisdictional features were present in the JD study area. These features are man-made and appear to have been constructed for agricultural purposes, but are no longer in use (remnant, non-functional), or were constructed as Best Management Practices (BMP) ditches to prevent erosion.

4.2 Conclusion

USACE/RWQCB jurisdictional resources within the JD study area include 2.581 acres of non-wetland waters of the U.S. and State and waters of the state, 1.473 acres of wetland waters of the U.S. and State. Additionally, 0.104 acre of RWQCB non-wetland waters of the State and 0.064 acre of RWQCB wetland waters of the State occur within the JD study area. A total of 7.210 acres of CDFW riparian

habitat, and 7.218 acre CDFW streambed occur within the JD study area. Refer to Table 4-1 for a summary of the USACE, RWQCB, and CDFW jurisdictions for wetlands and non-wetlands. The delineated features are associated with the Santa Ana River, which eventually empties into the Pacific Ocean (a Traditional Navigable Water). Therefore, the delineated features are assumed to be subject to regulation under Sections 404 and 401 of the CWA. In addition, the tributaries to the Santa Ana River had a defined bed and bank and/or riparian canopy and therefore, are subject to CDFW jurisdiction under Sections 1600-1616 of the California Fish and Game Code. Feature 0005 is an isolated wetland of the state and jurisdictional under the Porter-Cologne Water Quality Control Act, subject to RWQCB oversight; in addition, Features 0007, 0008, and 0010 are also waters of the state subject to RWQCB jurisdiction under the Porter-Cologne Act. The project may result in impacts that would require authorization under the CWA Section 404, a CWA 401 Water Quality Certification, a Waste Discharge Requirement and/or a Streambed Alteration Agreement.

Table 4-2. Jurisdictional Delineation Details for USACE, RWQCB, and CDFW Aquatic Resources

Name of Aquatic Resource	Feature Type	Cowardin Type*	Non-wetland				Wetland		Vegetation Community	Latitude/ Longitude
			USACE/RWQCB Streambed Acreage (acres)	RWQCB Streambed Acreage (acres)	CDFW Riparian Acreage (acres)	CDFW Streambed Acreage (acres)	USACE/RWQCB Wetland Acreage (acres)	RWQCB Wetland Acreage (acres)		
Feature 0001	Concrete channel	R4SBCr	0.025	--	--	0.068	--	--	Developed	34.011502°/ -117.528840°
Feature 0002 (Santa Ana River)	Earthen channel	PFO/ EM1C R2UBH	0.762	--	6.092	4.277	1.212	--	Riparian Scrub, Southern Willow Scrub, Non-Native Riparian Woodland, Mulefat Scrub, and Non-native Grasslands	33.959776°/ -117.528344
Feature 0003	Earthen channel	PSSC	0.051	--	0.257	<0.001	--	--	Southern Willow Scrub	33.960351°/ -117.502914°
Feature 0004	Earthen channel	R4SBA	0.126	--	0.116	0.203	--	--	Mulefat Scrub	33.960364°/ -117.493273°
Feature 0005	Seasonal Wet Depression	N/A	--	--	--	--	--	0.064	Mulefat Scrub	33.960288°/ -117.490604°
Feature 0006	Earthen channel	PSSA	0.012	--	--	0.195			Non-native Riparian Woodland	33.961151°/ -117.481932°
Feature 0007	Swale	N/A	--	0.039	--	--	--	--	Ruderal	33.961460°/ -117.480065°
Feature 0008	Swale	N/A	--	0.026	--	--	--	--	Ruderal	33.961674°/ -117.479651°
Feature 0009	Earthen channel	R4SBA	0.011	--	--	0.057	--	--	Ruderal	33.962296°/ -117.479209°
Feature 0010	Swale	N/A	--	0.039	--	--	--	--	Ruderal	33.963221°/ -117.476951°
Feature 0011	Earthen channel	PFOA	0.028	--	0.224	0.010	--	--	Riparian Scrub	33.962783°/ -117.476634°
Feature 0012	Earthen channel	PSSA	0.162	--	0.037	0.260	--	--	Mulefat Scrub	33.962823°/ -117.476034° °
Feature 0013	Earthen channel	PSSA	0.821	--	--	1.412	--	--	Ruderal	33.961402°/ -117.472463°
Feature 0014	Earthen channel	PFO/ EM1C	0.535	--	0.463	0.530	0.163	--	Southern Riparian Scrub	33.960589°/ -117.465960°

Name of Aquatic Resource	Feature Type	Cowardin Type*	Non-wetland				Wetland		Vegetation Community	Latitude/ Longitude
			USACE/RWQCB Streambed Acreage (acres)	RWQCB Streambed Acreage (acres)	CDFW Riparian Acreage (acres)	CDFW Streambed Acreage (acres)	USACE/RWQCB Wetland Acreage (acres)	RWQCB Wetland Acreage (acres)		
Feature 0015	Earthen channel	N/A	0.025	--	0.021	0.113	0.098	--	Ruderal	33.965272°/ -117.450556°
Feature 0016	Earthen channel	R4SBA	0.022	--	--	0.088	--	--	Ruderal	33.966039°/ -117.446932°
Feature 0017	Earthen channel	R4SBA	0.001	--	--	0.005	--	--	Ruderal	33.966675°/ -117.444571°
Total --			**2.581**	**0.104**	**7.210**	**7.218**	**1.473**	**0.064**	--	--

***Cowardin Type**

System
R= Riverine
P= Palustrine

Subsystem
2= Lower Perennial
4=Intermittent

Class
EM= Emergent
F= Forested
SB= Streambed
SS= Scrub-Shrub
UB= Unconsolidated Bottom

Subclass
1= Persistent

Water Regime
A= Temporary Flooded
C= Seasonally Flooded
H= Permanently Flooded

Special Modifier
r= Artificial substrate

Chapter 5
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Attachment 1

Figures

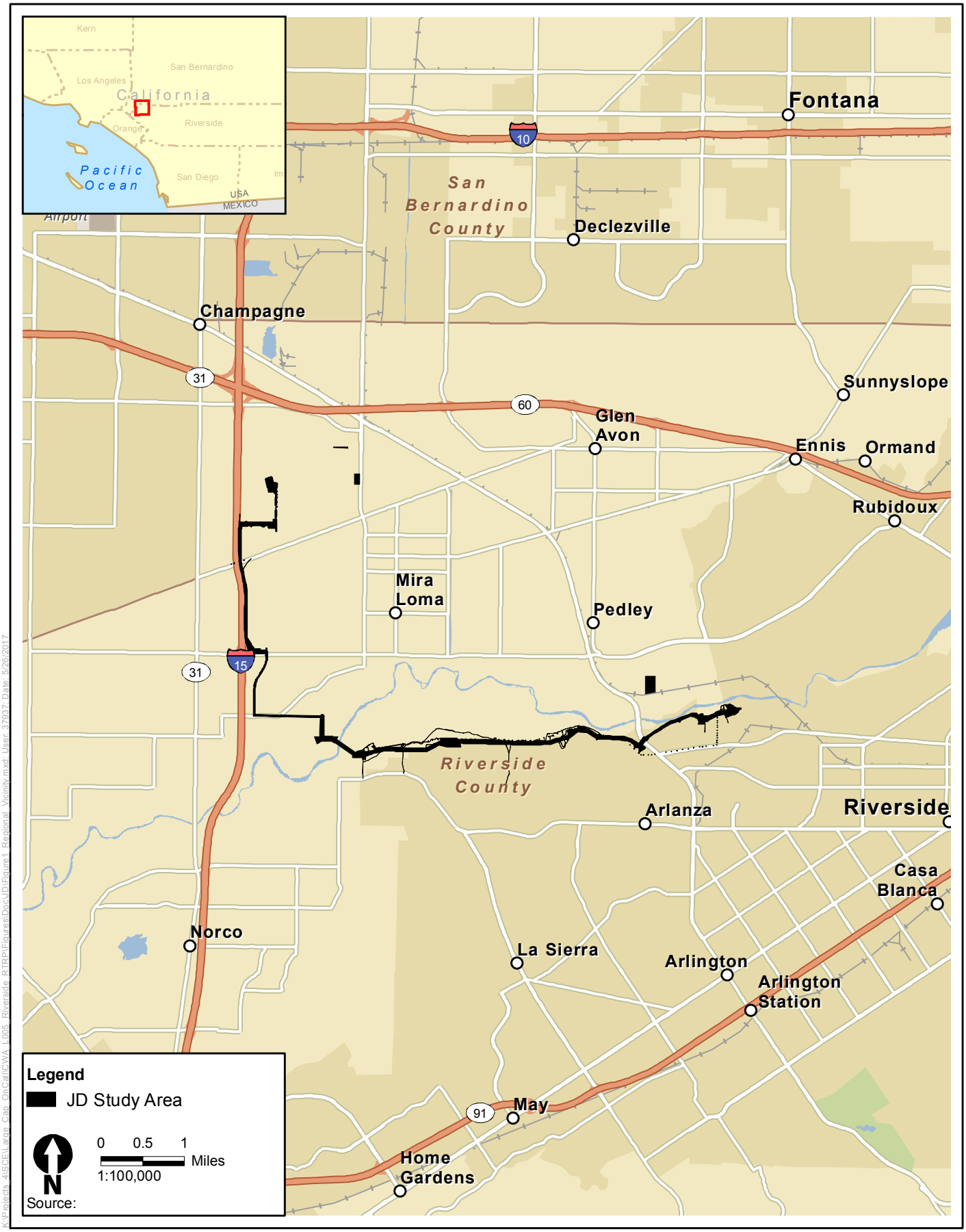

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Figure 1
Project Vicinty
Riverside Transmission Reliability Project

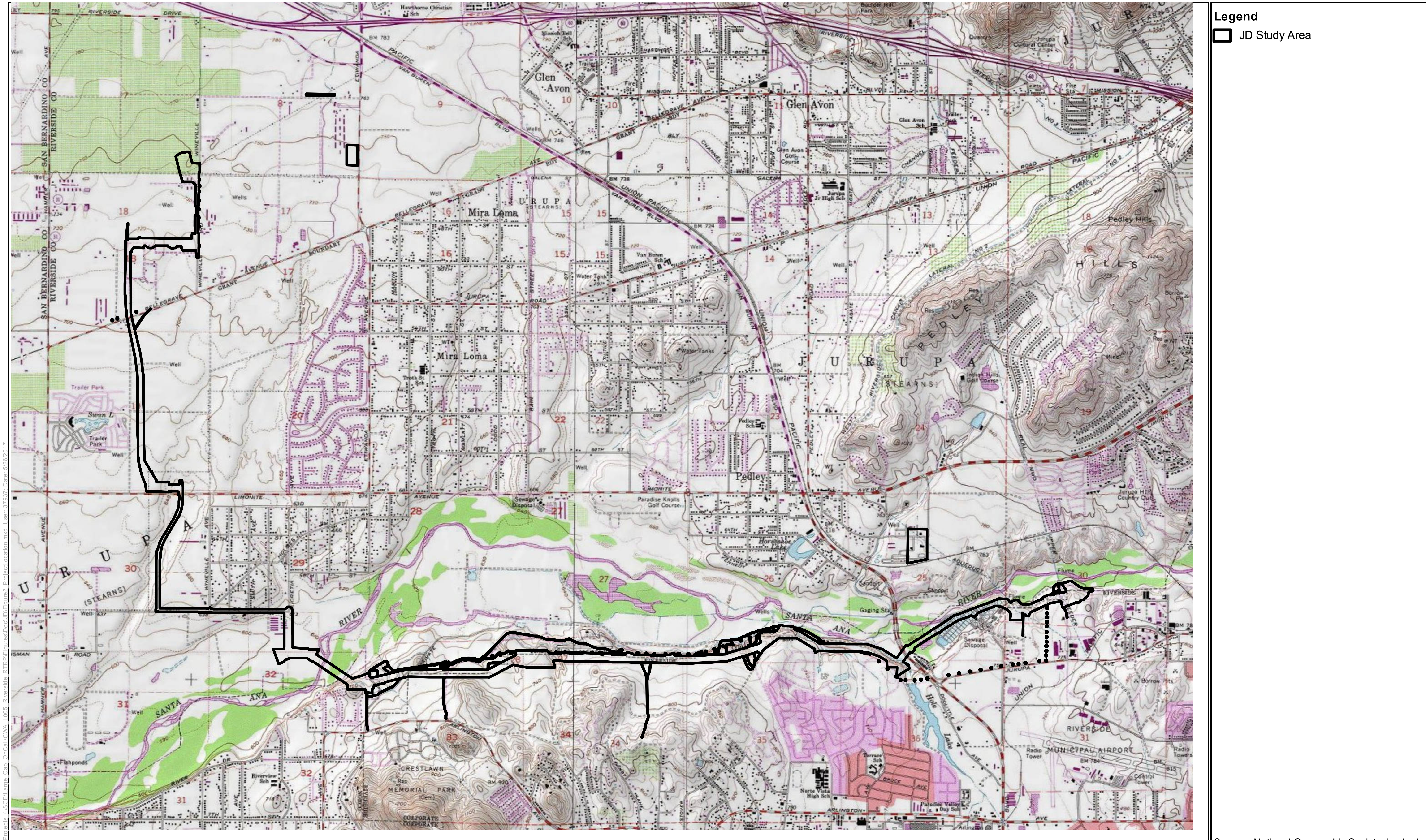

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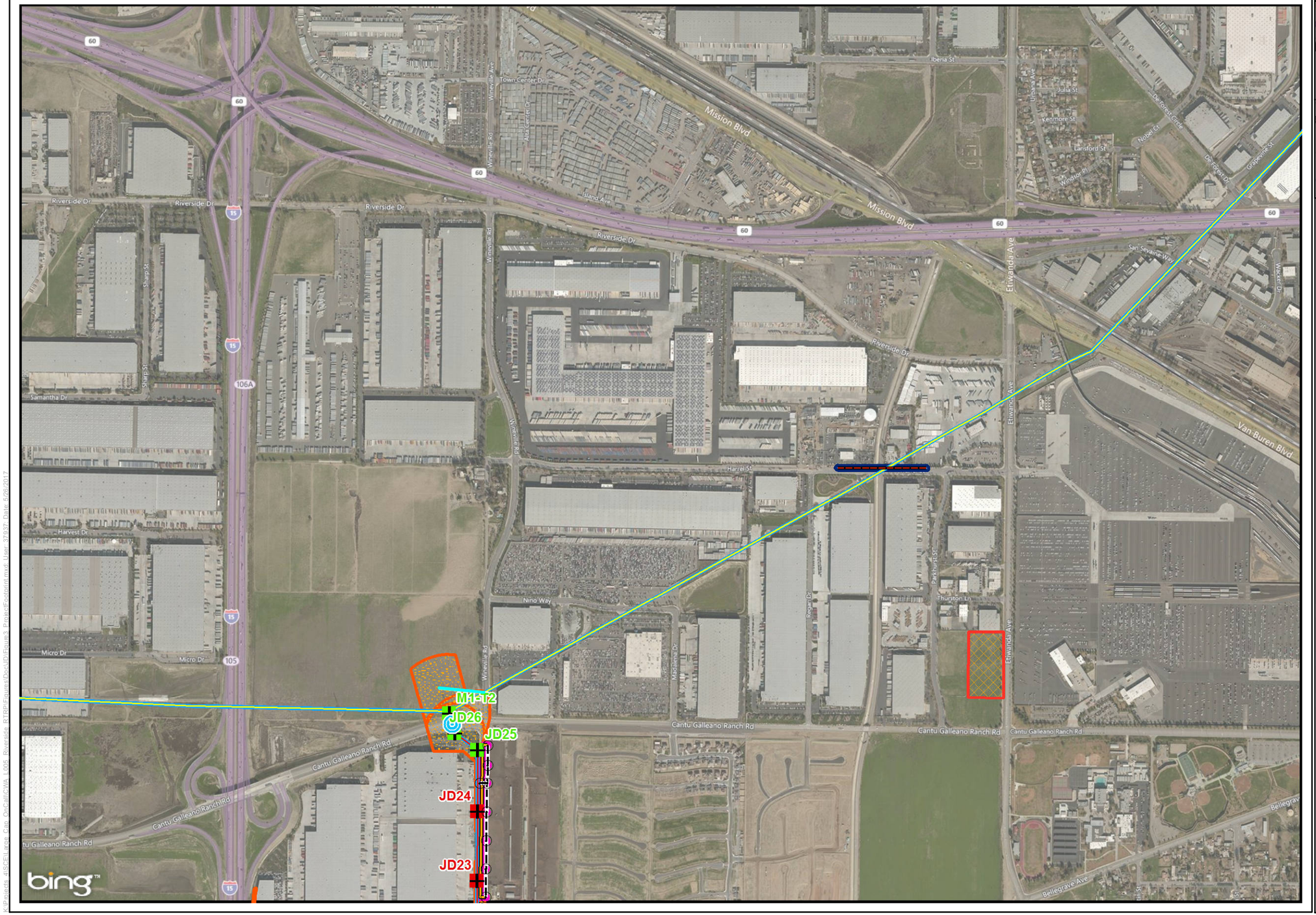
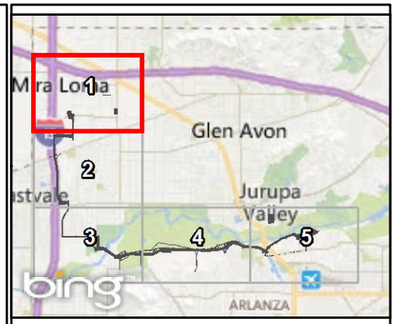
Figure 2
Project Location
Riverside Transmission Reliability Project





Legend

- Guard Pole - Temporary
- Existing Distribution Structure
- Tubular Steel Pole (TSP)
- Lattice Steel Tower (LST)
- Existing Overhead Alignment
- New Underground Alignment
- Existing Transmission Overhead Alignment
- Replace Exisiting Telecom Overhead Alignment
- New Telecom Underground Alignment
- n/a, Travel_Path (Temporary)
- Distribution Disturbance Area
- Telecom Disturbance Area
- Ground Disturbance Area Data (GDAD) Buffer Area (Hybrid Route)
- Marshalling Yard

Source: Microsoft; USDA NRCS Soils

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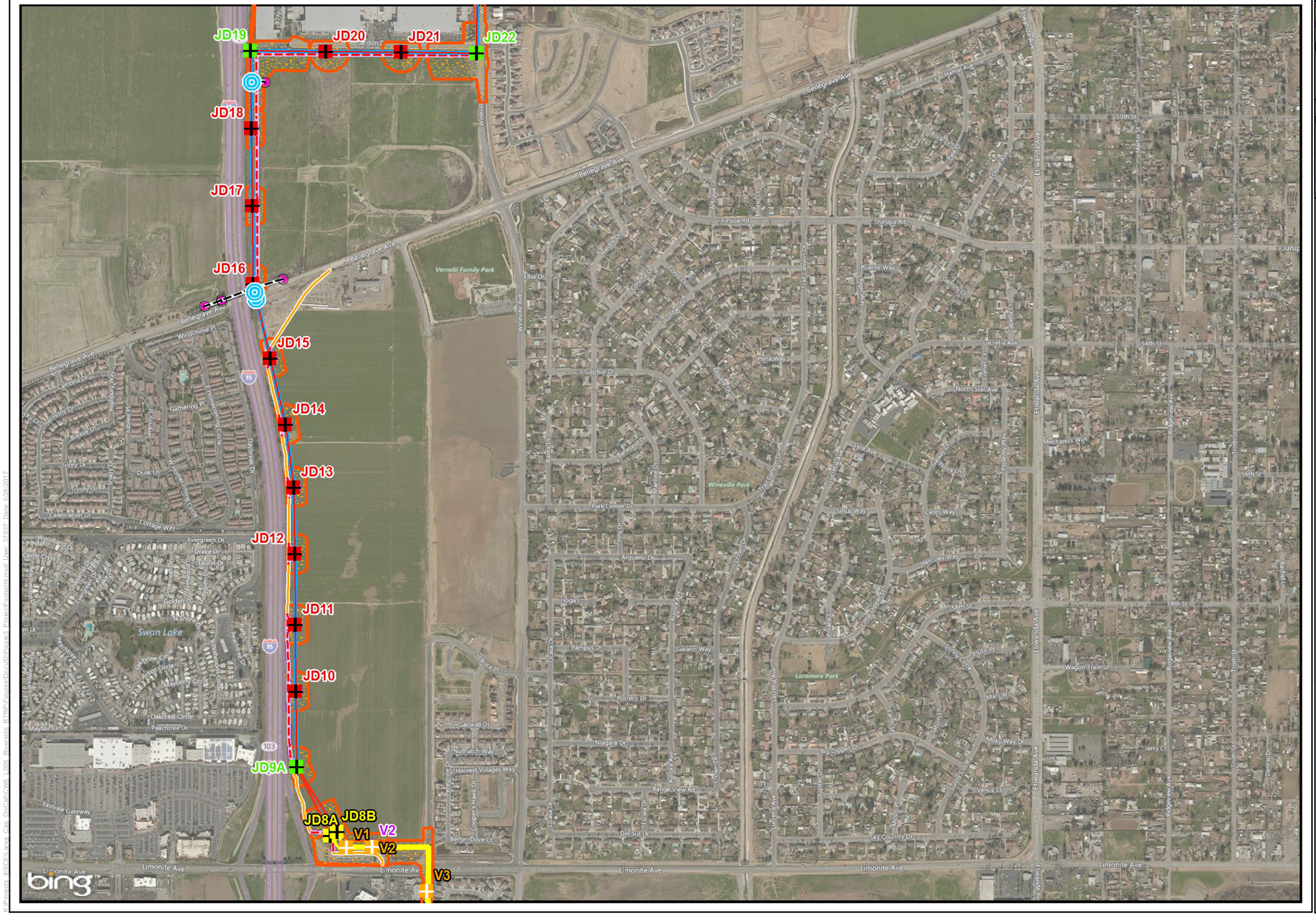
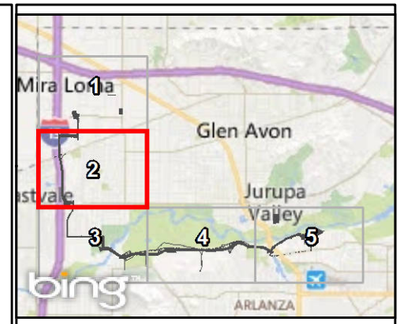
Figure 3, Sheet 1 of 5
Project Footprint
Riverside Transmission Reliability Project





Legend

- Guard Pole - Temporary
- Existing Distribution Structure
- Tubular Steel Pole (TSP)
- Lattice Steel Tower (LST)
- Riser pole (TSP)
- Vault
- Proposed Telecom Vaults* (Adjacent to Electrical Vault per Telecom design)
- Overhead Proposed Alignment
- Underground Proposed Alignment
- Existing Overhead Alignment
- Replace Exisiting Telecom Overhead Alignment
- New Telecom Underground Alignment
- Existing, Access Road (Permanent)
- New, Stub Road (Permanent)
- Access Road
- Distribution Disturbance Area
- Ground Disturbance Area Data (GDAD) Buffer Area (Hybrid Route)

Source: Microsoft; USDA NRCS Soils

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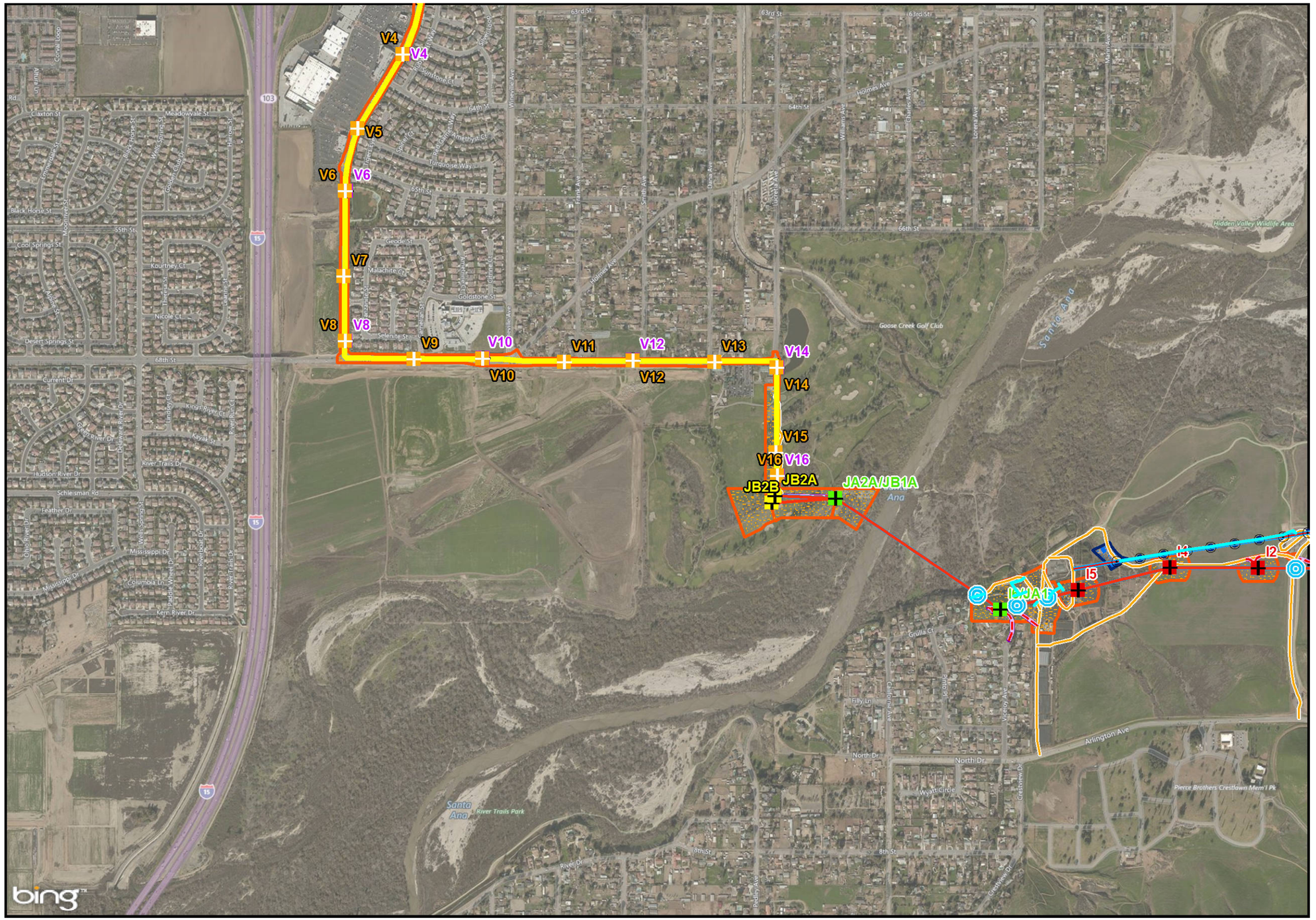
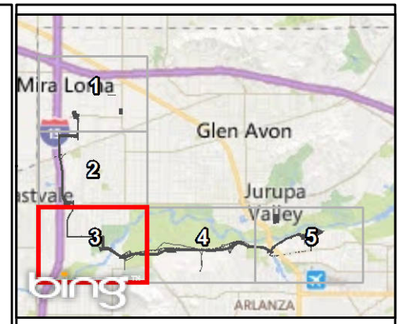
Figure 3, Sheet 2 of 5
Project Footprint
Riverside Transmission Reliability Project





Legend

- Guard Pole - Temporary
- Existing Distribution Structure
- Tubular Steel Pole (TSP)
- Lattice Steel Tower (LST)
- Riser pole (TSP)
- Vault
- Proposed Telecom Vaults* (Adjacent to Electrical Vault per Telecom design)
- Overhead Proposed Alignment
- Underground Proposed Alignment
- Replace Exisiting Telecom Overhead Alignment
- New Telecom Underground Alignment
- Existing, Access Road (Permanent)
- New, Stub Road (Permanent)
- n/a, Travel_Path (Temporary)
- Access Road
- Telecom Disturbance Area
- Ground Disturbance Area Data (GDAD) Buffer Area (Hybrid Route)

Source: Microsoft; USDA NRCS Soils

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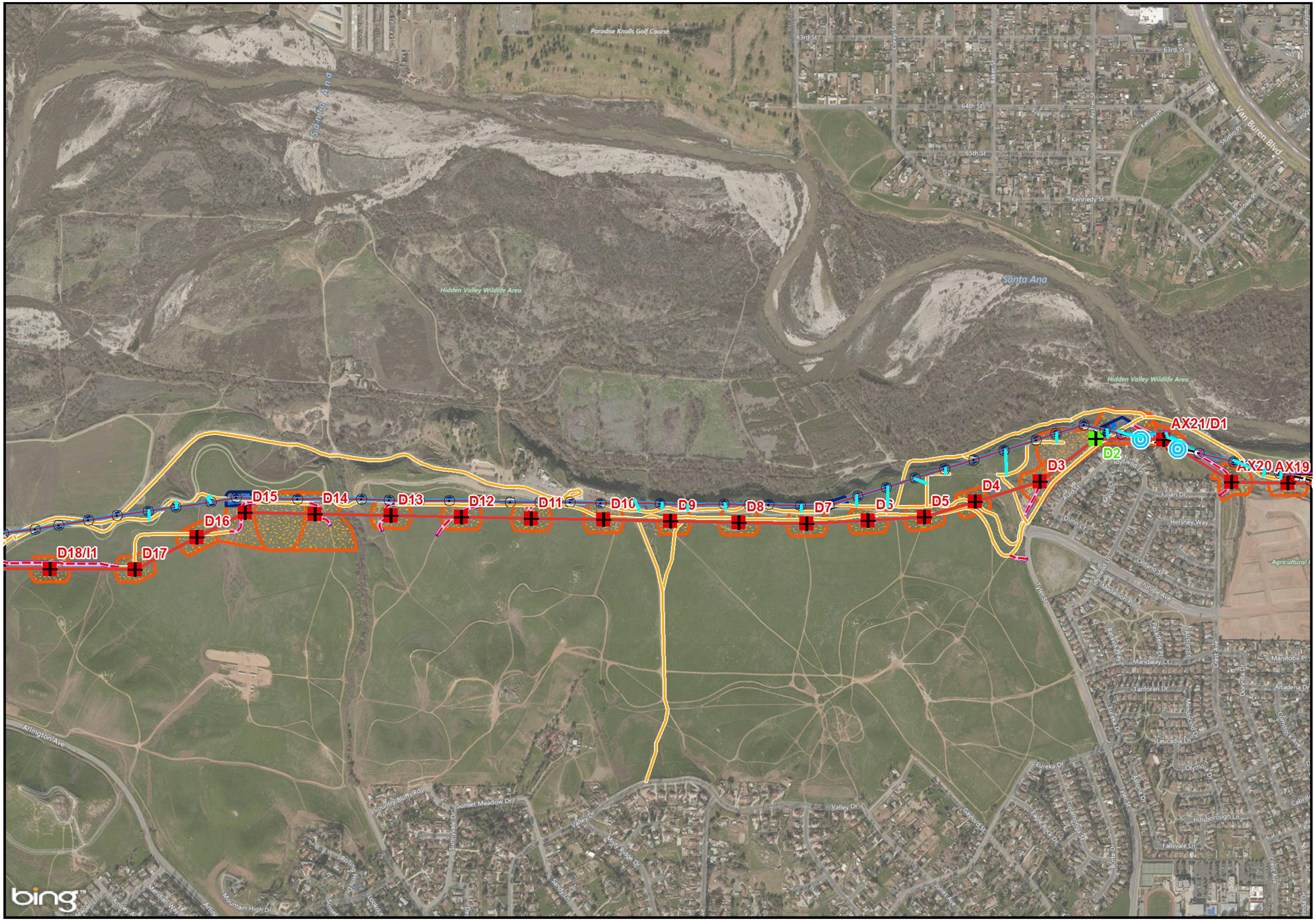
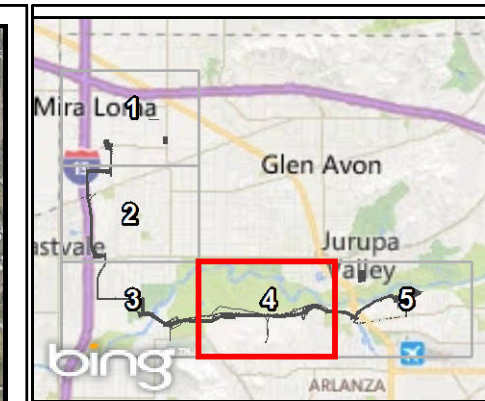
Figure 3, Sheet 3 of 5
Project Footprint
Riverside Transmission Reliability Project





Legend

- Guard Pole - Temporary
- Existing Distribution Structure
- New Distribution Structure
- Tubular Steel Pole (TSP)
- Lattice Steel Tower (LST)
- Overhead Proposed Alignment
- Existing Overhead Alignment
- New Overhead Alignment
- New Underground Alignment
- Replace Exisiting Telecom Overhead Alignment
- New Telecom Underground Alignment
- Existing, Access Road (Permanent)
- New, Stub Road (Permanent)
- n/a, Travel_Path (Temporary)
- Access Road
- Distribution Disturbance Area
- Telecom Disturbance Area
- Ground Disturbance Area Data (GDAD) Buffer Area (Hybrid Route)

Source: Microsoft; USDA NRCS Soils

ICF

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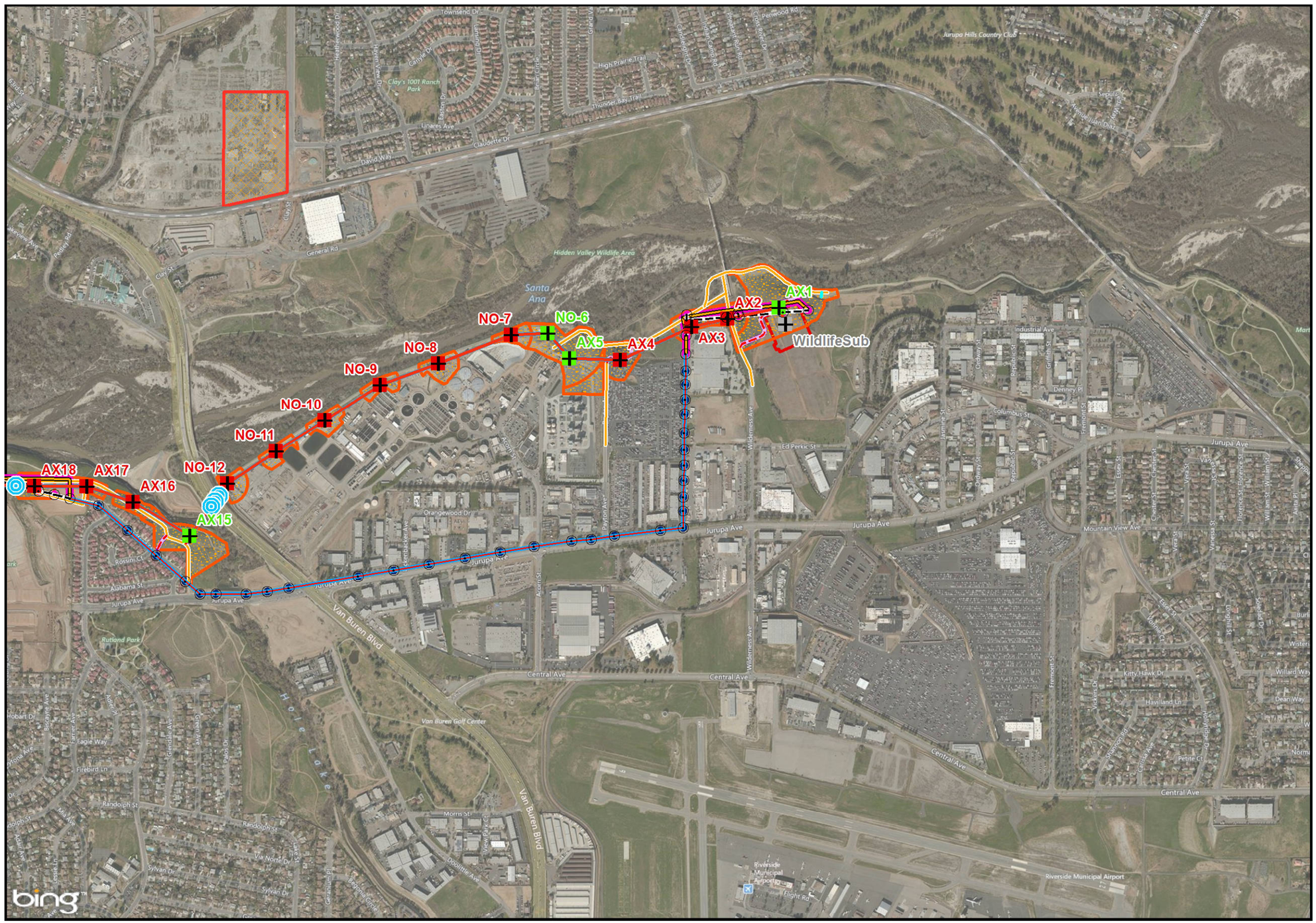
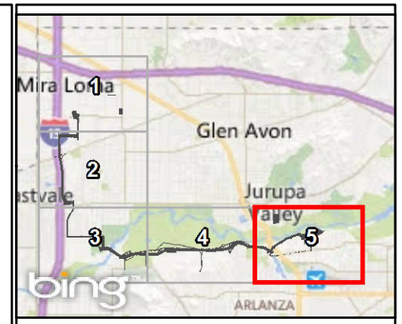
Figure 3, Sheet 4 of 5
Project Footprint
Riverside Transmission Reliability Project





Legend

- Guard Pole - Temporary
- Existing Distribution Structure
- Tubular Steel Pole (TSP)
- Lattice Steel Tower (LST)
- Rack
- Overhead Proposed Alignment
- Existing Overhead Alignment
- New Underground Alignment
- Replace Exisiting Telecom Overhead Alignment
- New Telecom Underground Alignment
- Existing, Access Road (Permanent)
- New, Stub Road (Permanent)
- n/a, Travel_Path (Temporary)
- Access Road
- Distribution Disturbance Area
- Telecom Disturbance Area
- Ground Disturbance Area Data (GDAD) Buffer Area (Hybrid Route)
- Marshalling Yard
- Substation

Source: Microsoft; USDA NRCS Soils

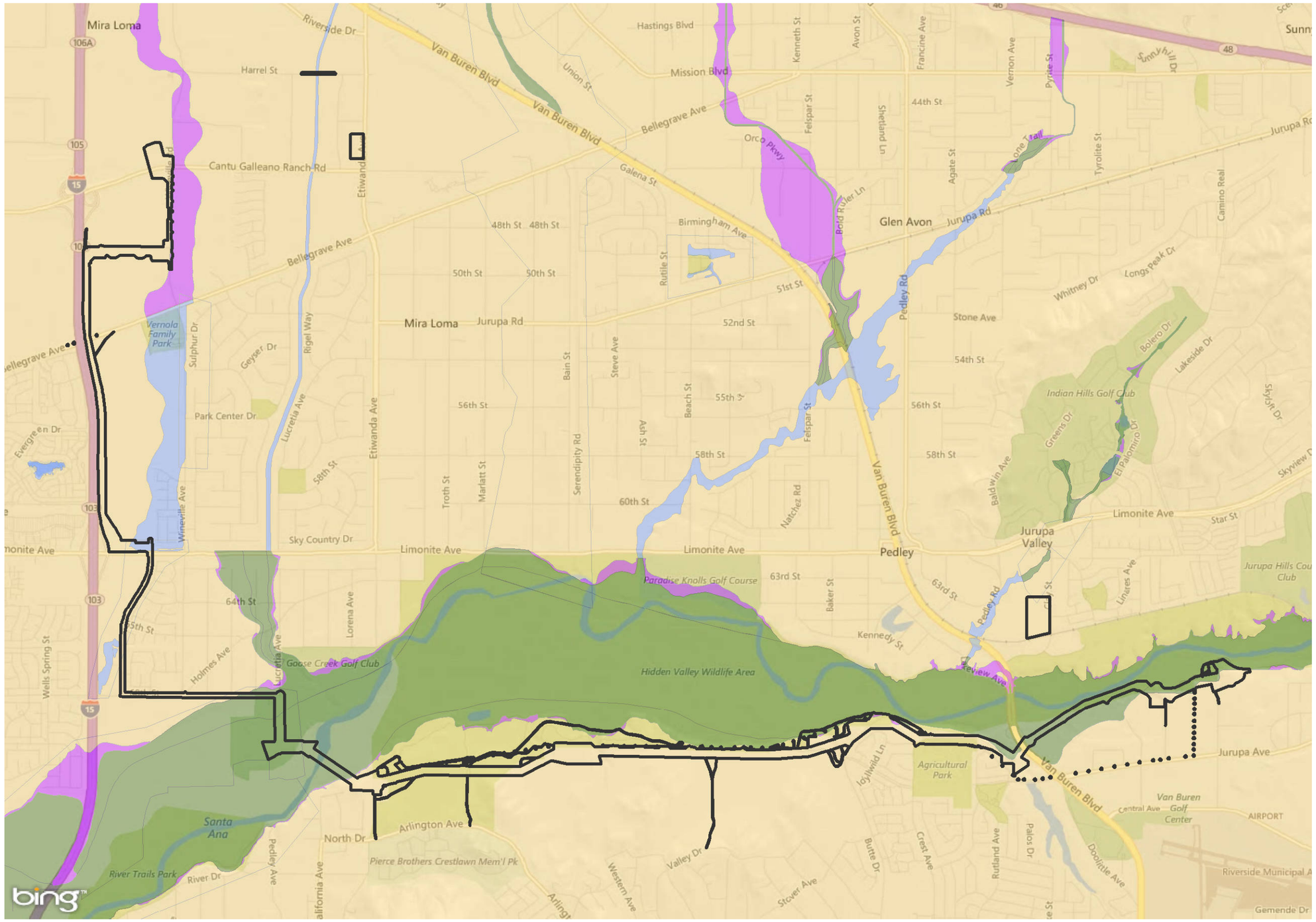
ICF

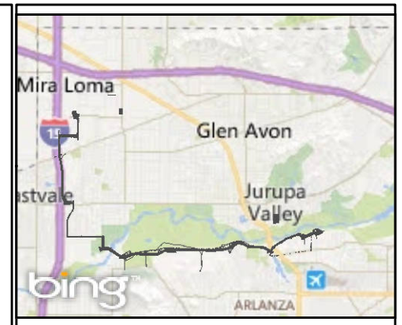
N

0 10,000 20,000 Feet

1:12,000

Figure 3, Sheet 5 of 5
Project Footprint
Riverside Transmission Reliability Project





Legend

- JD Study Area

FEMA FLOOD ZONES

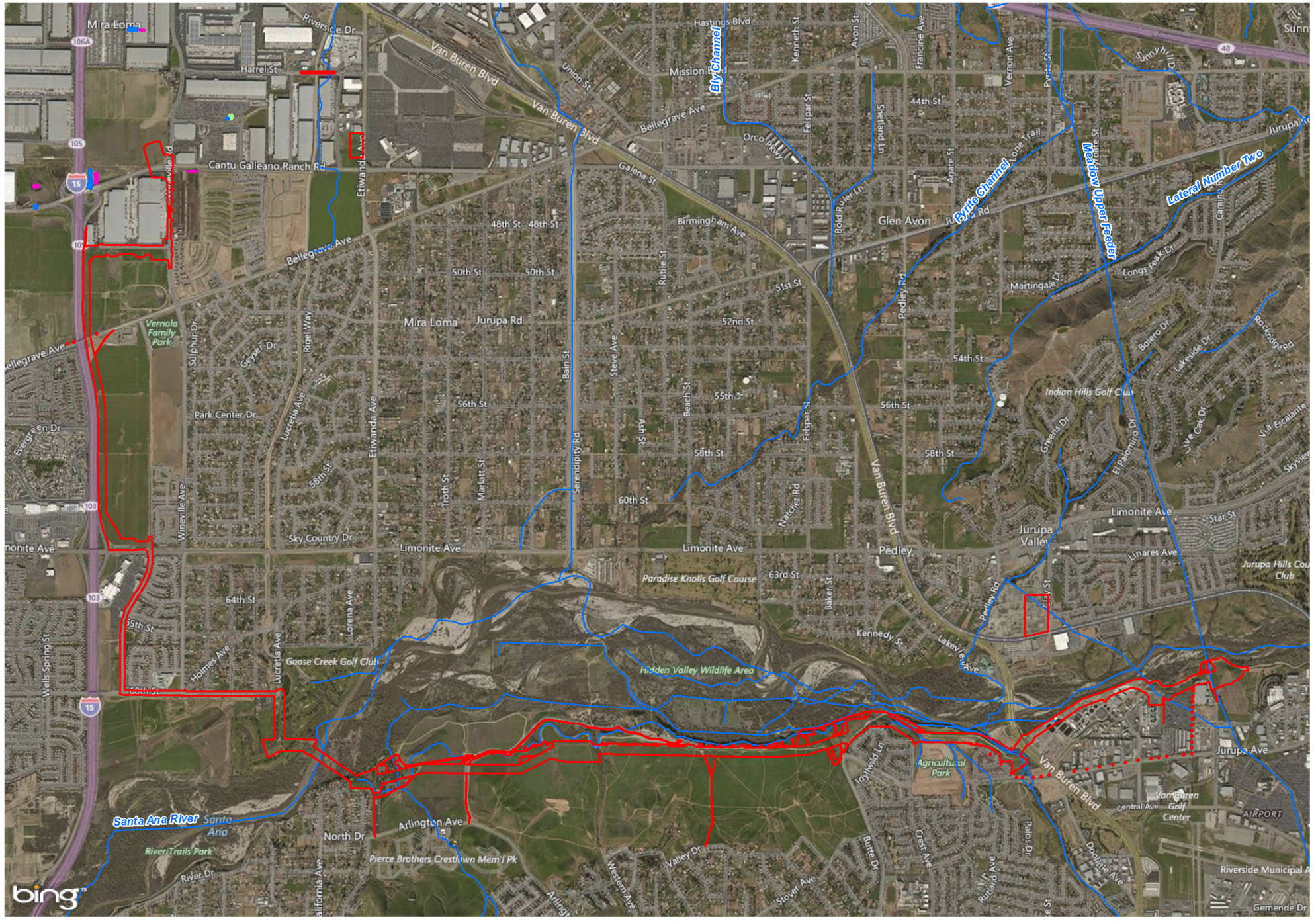
- 0.2 PCT ANNUAL CHANCE FLOOD HAZARD
- ZONE A
- ZONE AE
- ZONE X

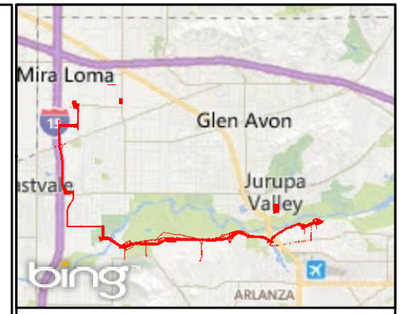
Source: Microsoft; USDA NRCS Soils

0 10,000 20,000 Feet
1:33,043

N

Figure 3
FEMA Flood Zones
Riverside Transmission Reliability Project





Legend

- JD Study Area
- NHD Data

NWI Wetland Type

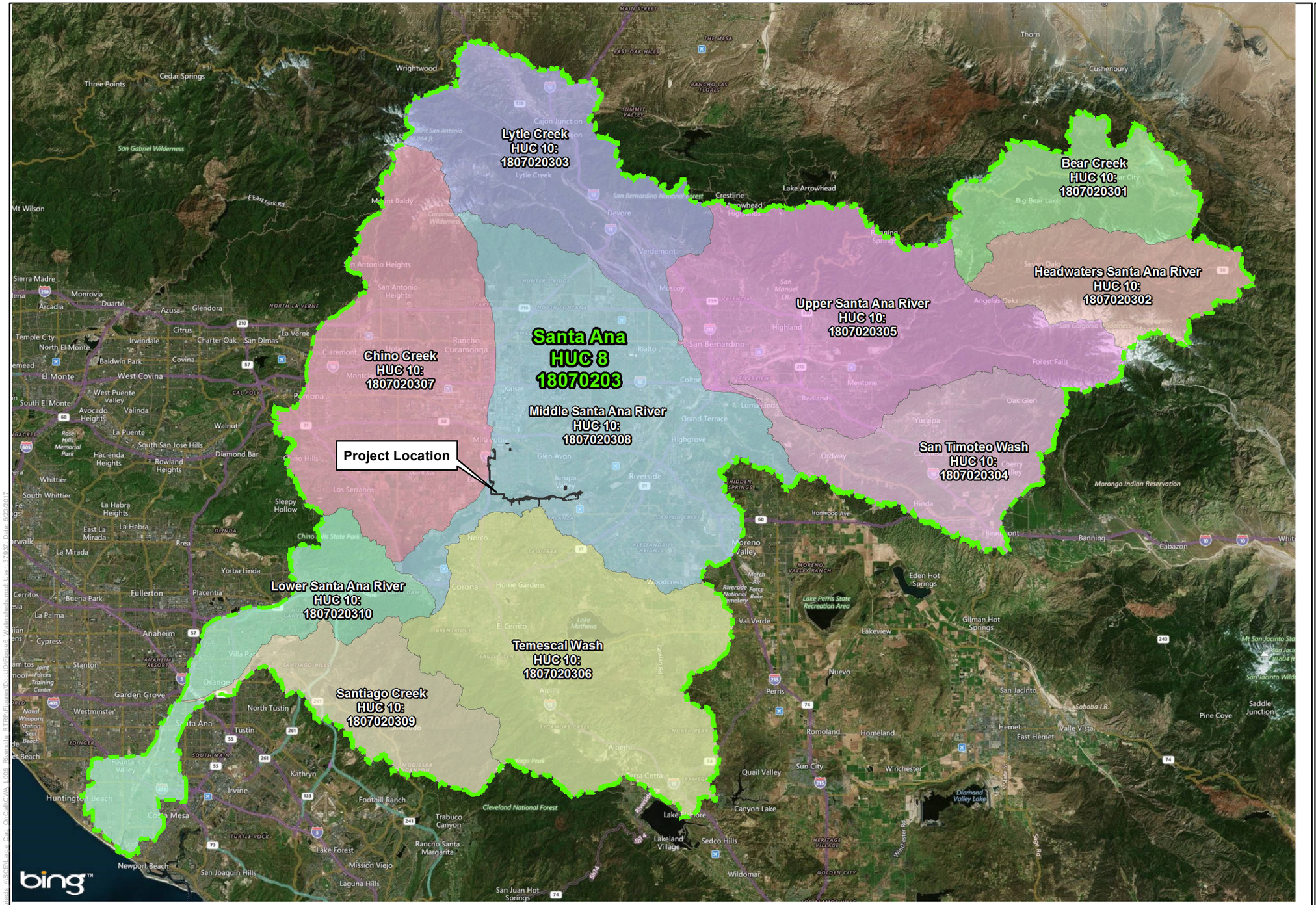
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Other

Source: Microsoft; USDA NRCS Soils

0 10,000 20,000 Feet
1:33,043

N

Figure 5
Hydrography and Wetlands
Riverside Transmission Reliability Project



Legend

- JD Study Area

HUC 10

- Santa Ana

HUC10

HUC 10

- Bear Creek
- Chino Creek
- Headwaters Santa Ana River
- Lower Santa Ana River
- Lytle Creek
- Middle Santa Ana River
- San Timoteo Wash
- Santiago Creek
- Temescal Wash
- Upper Santa Ana River

Source: Microsoft; USDA NRCS Soils

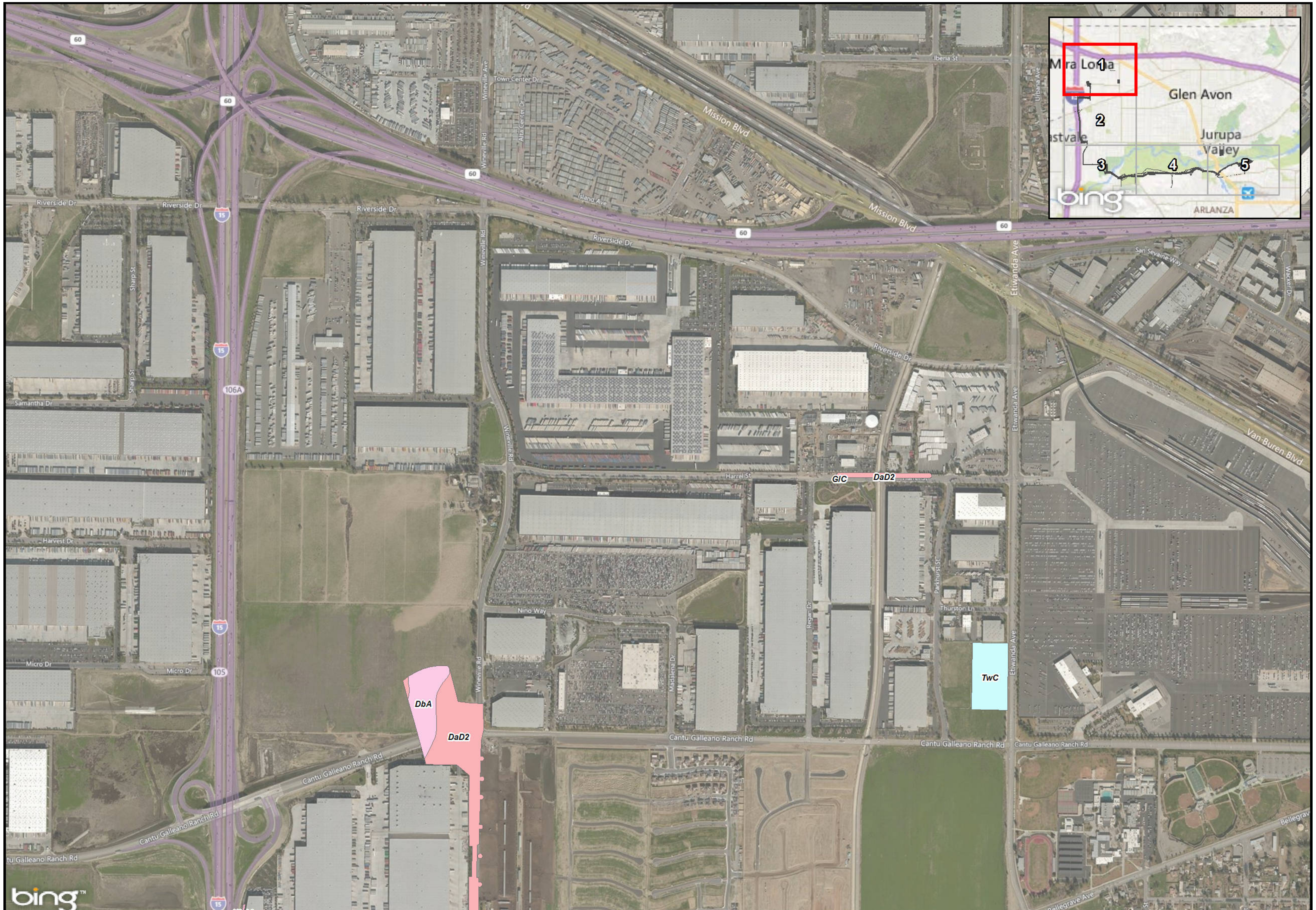
ICF

N

0 10,000 20,000 Feet

1:400,000

Figure 6
Watersheds
Riverside Transmission Reliability Project



Legend

Soils

- DaD2 - Delhi fine sand, 2 to 15 percent slopes, wind-eroded
- DbA - Delhi loamy fine sand, 0 to 2 percent slopes
- GlC - Gorgonio loamy sand, deep, 2 to 8 percent slopes
- HhA2 - Hilmar loamy sand, 0 to 2 percent slopes, eroded
- TwC - Tujunga gravelly loamy sand, 0 to 8 percent slopes

Source: Microsoft; USDA NRCS Soils

ICF

N

0 10,000 20,000 Feet

1:12,000

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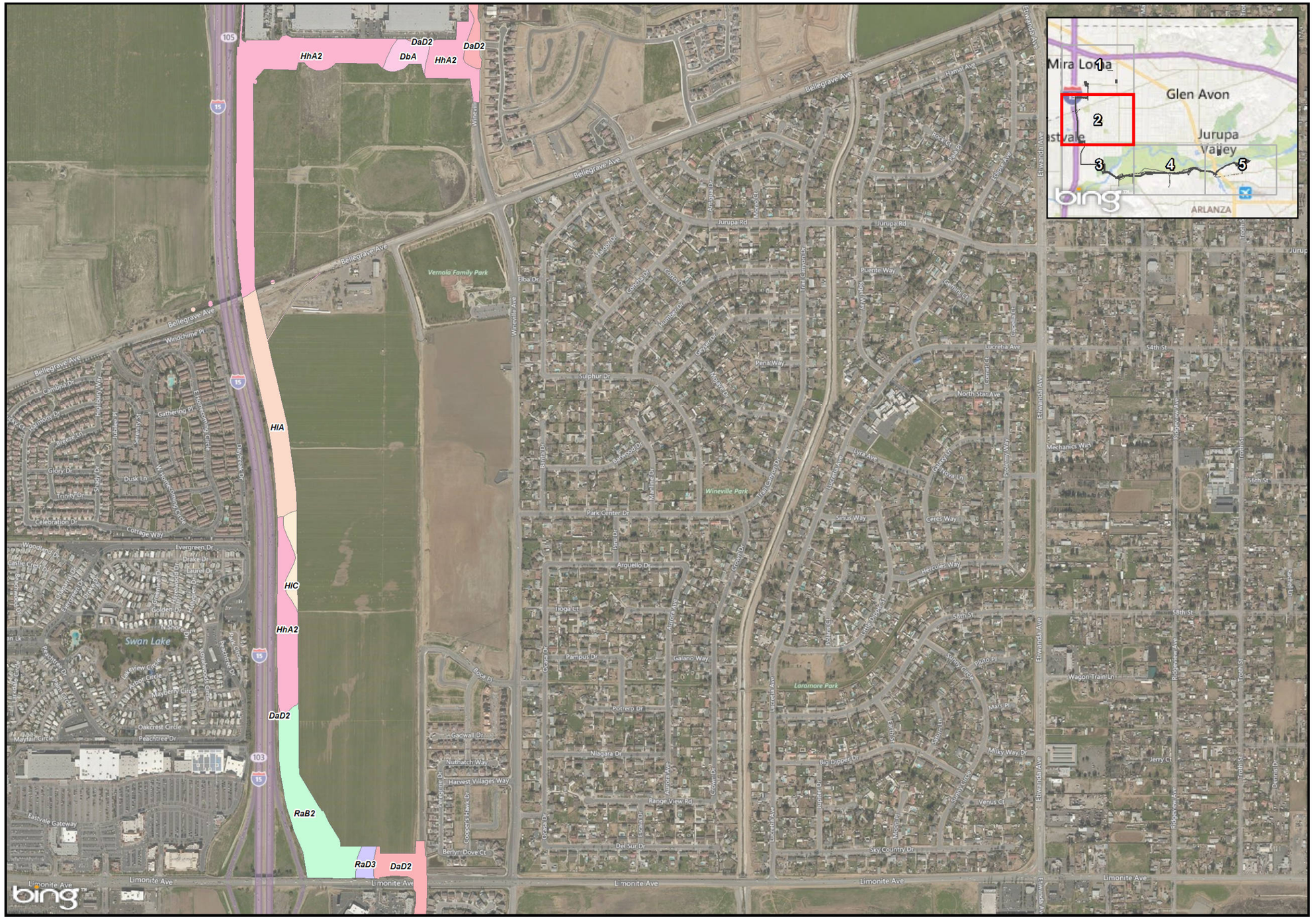
Figure 7, Sheet 1 of 5
Soils
Riverside Transmission Reliability Project



Legend

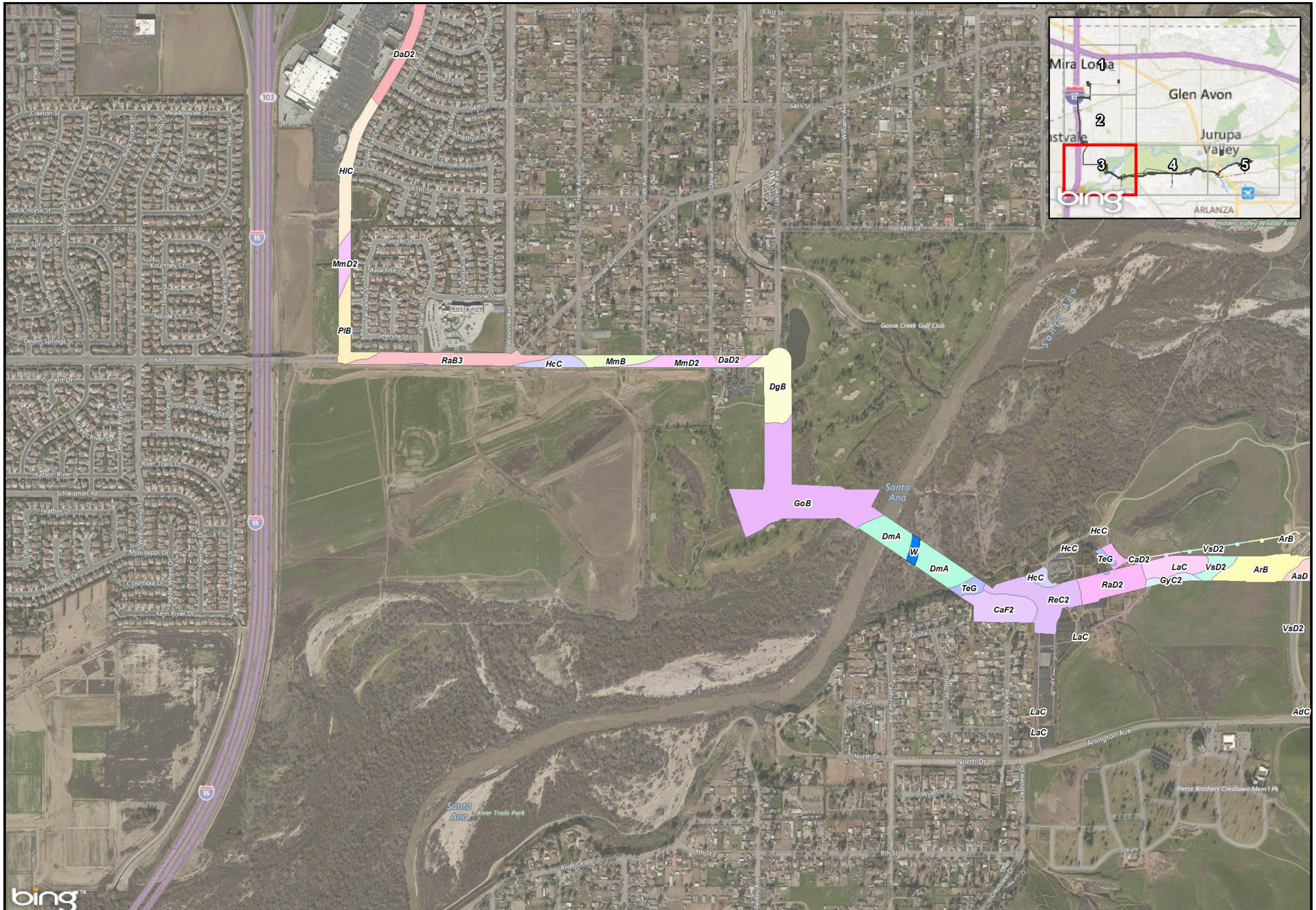
Soils

- DaD2 - Delhi fine sand, 2 to 15 percent slopes, wind-eroded
- DbA - Delhi loamy fine sand, 0 to 2 percent slopes
- HhA2 - Hilmar loamy sand, 0 to 2 percent slopes, eroded
- HlA - Hilmar loamy very fine sand, 0 to 2 percent slopes
- HlC - Hilmar loamy very fine sand, 2 to 8 percent slopes
- RaB2 - Ramona sandy loam, 2 to 5 percent slopes, eroded
- RaD3 - Ramona sandy loam, 8 to 15 percent slopes, severely eroded

Source: Microsoft; USDA NRCS Soils

0 10,000 20,000 Feet
1:12,000

Figure 7, Sheet 2 of 5
Soils
Riverside Transmission Reliability Project



Legend

Soils

- AaD - Altamont clay, 5 to 15 percent slopes
- AdC - Anza loam, 2 to 8 percent slopes
- AoD - Arlington fine sandy loam, deep, 8 to 15 percent slopes
- ArB - Arlington loam, deep, 0 to 5 percent slopes
- CaD2 - Cajalco fine sandy loam, 8 to 15 percent slopes, eroded
- CaF2 - Cajalco fine sandy loam, 15 to 35 percent slopes, eroded
- ChF2 - Cieneba sandy loam, 15 to 50 percent slopes, eroded
- DaD2 - Delhi fine sand, 2 to 15 percent slopes, wind-eroded
- DgB - Dello loamy sand, 0 to 5 percent slopes
- DmA - Dello loamy sand, poorly drained, 0 to 2 percent slopes
- GoB - Grangeville loamy fine sand, drained, 0 to 5 percent sl opes
- GyC2 - Greenfield sandy loam, 2 to 8 percent slopes, eroded
- HcC - Hanford coarse sandy loam, 2 to 8 percent slopes
- HIC - Hilmar loamy very fine sand, 2 to 8 percent slopes
- LaC - Las Posas loam, 2 to 8 percent slopes
- MmB - Monserate sandy loam, 0 to 5 percent slopes
- MmD2 - Monserate sandy loam, 8 to 15 percent slopes, eroded
- PIB - Placentia fine sandy loam, 0 to 5 percent slopes
- RaB3 - Ramona sandy loam, 0 to 5 percent slopes, severely eroded
- RaD2 - Ramona sandy loam, 8 to 15 percent slopes, eroded
- ReC2 - Ramona very fine sandy loam, 0 to 8 percent slopes, eroded
- TeG - Terrace escarpments
- VsD2 - Vista coarse sandy loam, 8 to 15 percent slopes, eroded
- W - Water

Source: Microsoft; USDA NRCS Soils

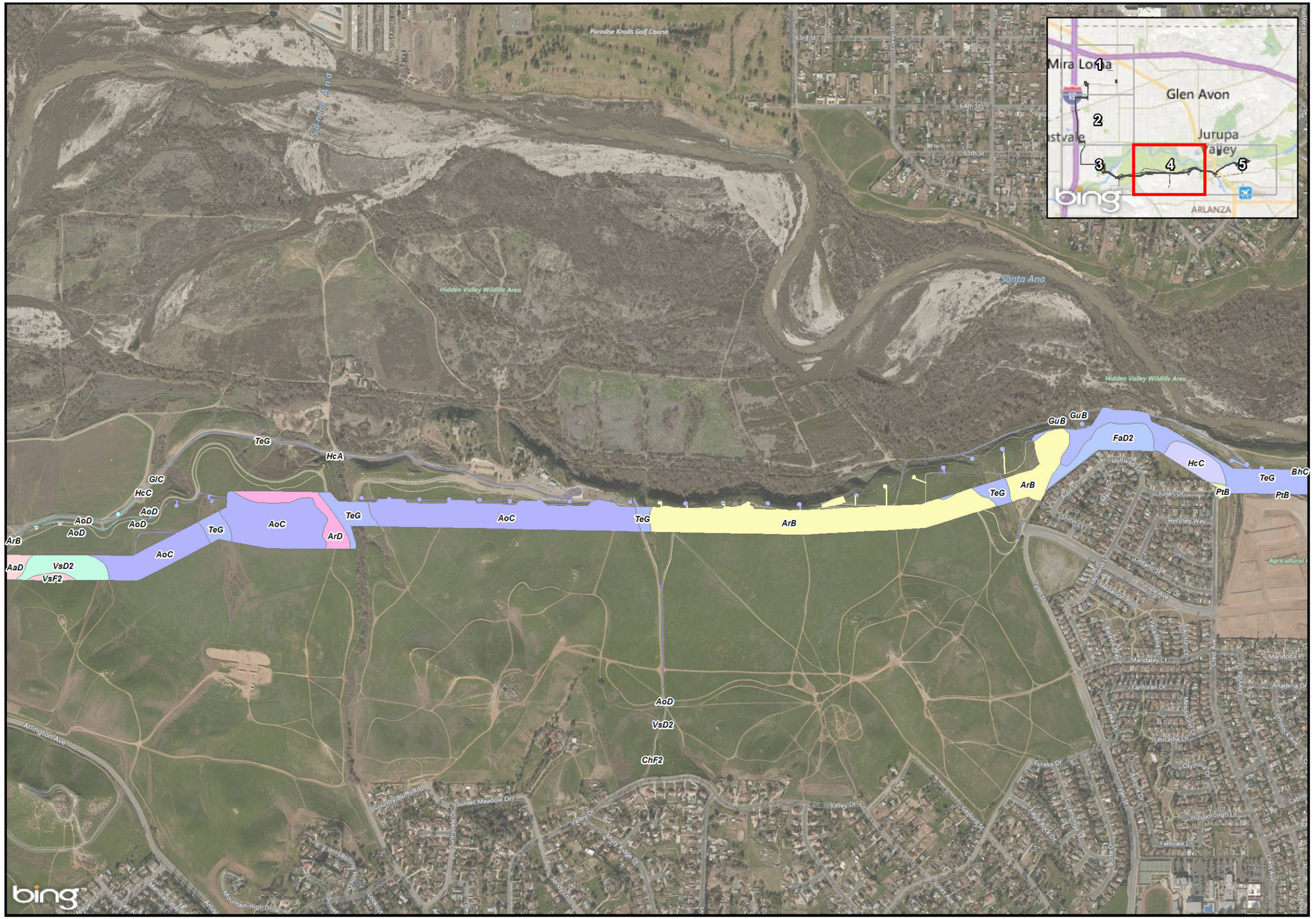
ICF

N

0 10,000 20,000 Feet

1:12,000

Figure 7, Sheet 3 of 5
Soils
Riverside Transmission Reliability Project



Legend

Soils

- AaD - Altamont clay, 5 to 15 percent slopes
- AoC - Arlington fine sandy loam, deep, 2 to 8 percent slopes
- AoD - Arlington fine sandy loam, deep, 8 to 15 percent slopes
- ArB - Arlington loam, deep, 0 to 5 percent slopes
- ArD - Arlington loam, deep, 5 to 15 percent slopes
- BhC - Buchenau loam, slightly saline-alkali, 2 to 8 percent slopes
- ChF2 - Cieneba sandy loam, 15 to 50 percent slopes, eroded
- FaD2 - Fallbrook sandy loam, 8 to 15 percent slopes, eroded
- GlC - Gorgonio loamy sand, deep, 2 to 8 percent slopes
- GuB - Grangeville fine sandy loam, poorly drained, saline-alk ali, 0 to 5 percent slopes
- HcA - Hanford coarse sandy loam, 0 to 2 percent slopes
- HcC - Hanford coarse sandy loam, 2 to 8 percent slopes
- PtB - Porterville clay, moderately deep, slightly saline-alka li, 0 to 5 percent slopes
- TeG - Terrace escarpments
- VsD2 - Vista coarse sandy loam, 8 to 15 percent slopes, eroded
- VsF2 - Vista coarse sandy loam, 15 to 35 percent slopes, eroded

Source: Microsoft; USDA NRCS Soils

ICF

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0 10,000 20,000 Feet

1:12,000

Figure 7, Sheet 4 of 5
Soils
Riverside Transmission Reliability Project

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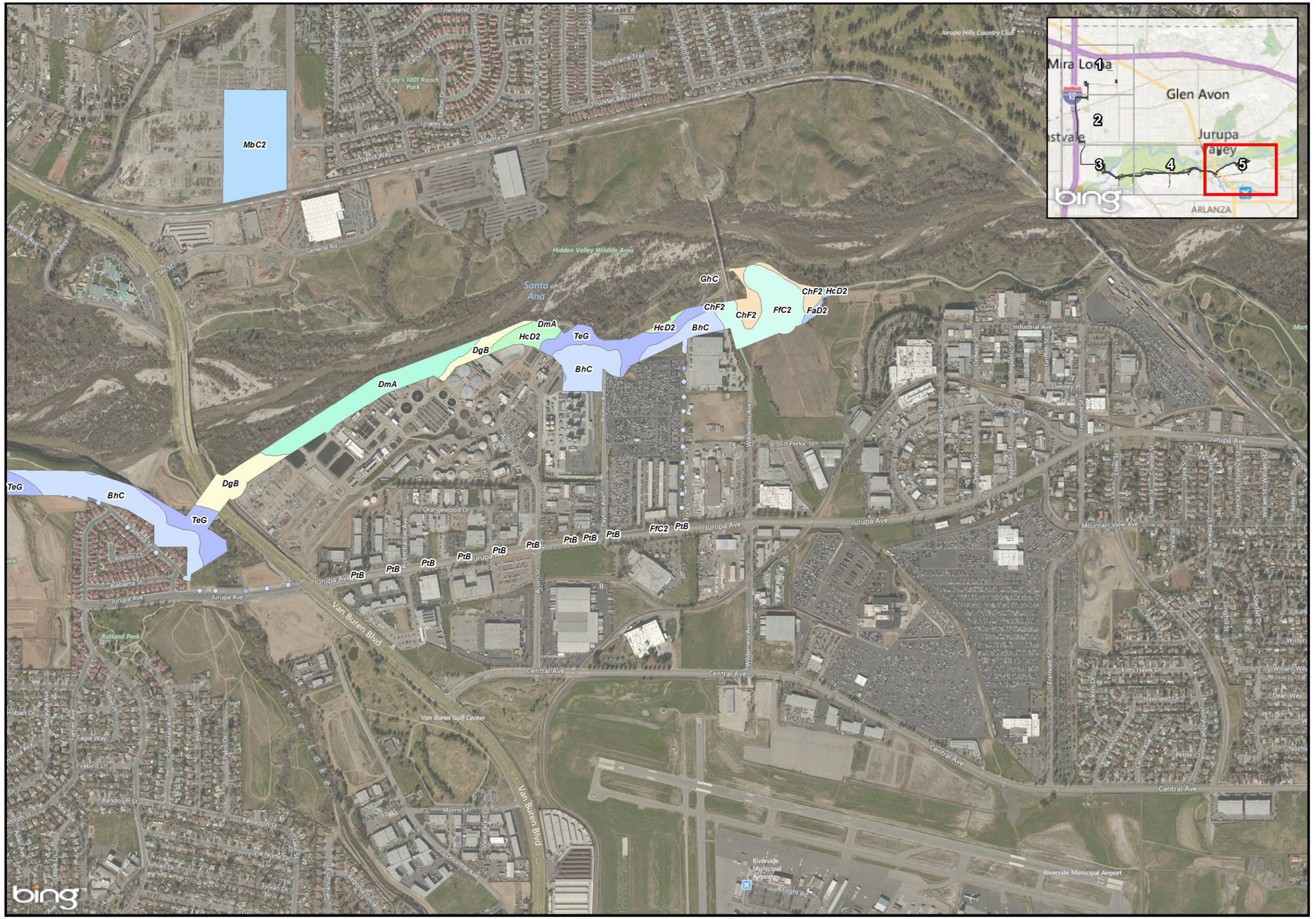


Legend

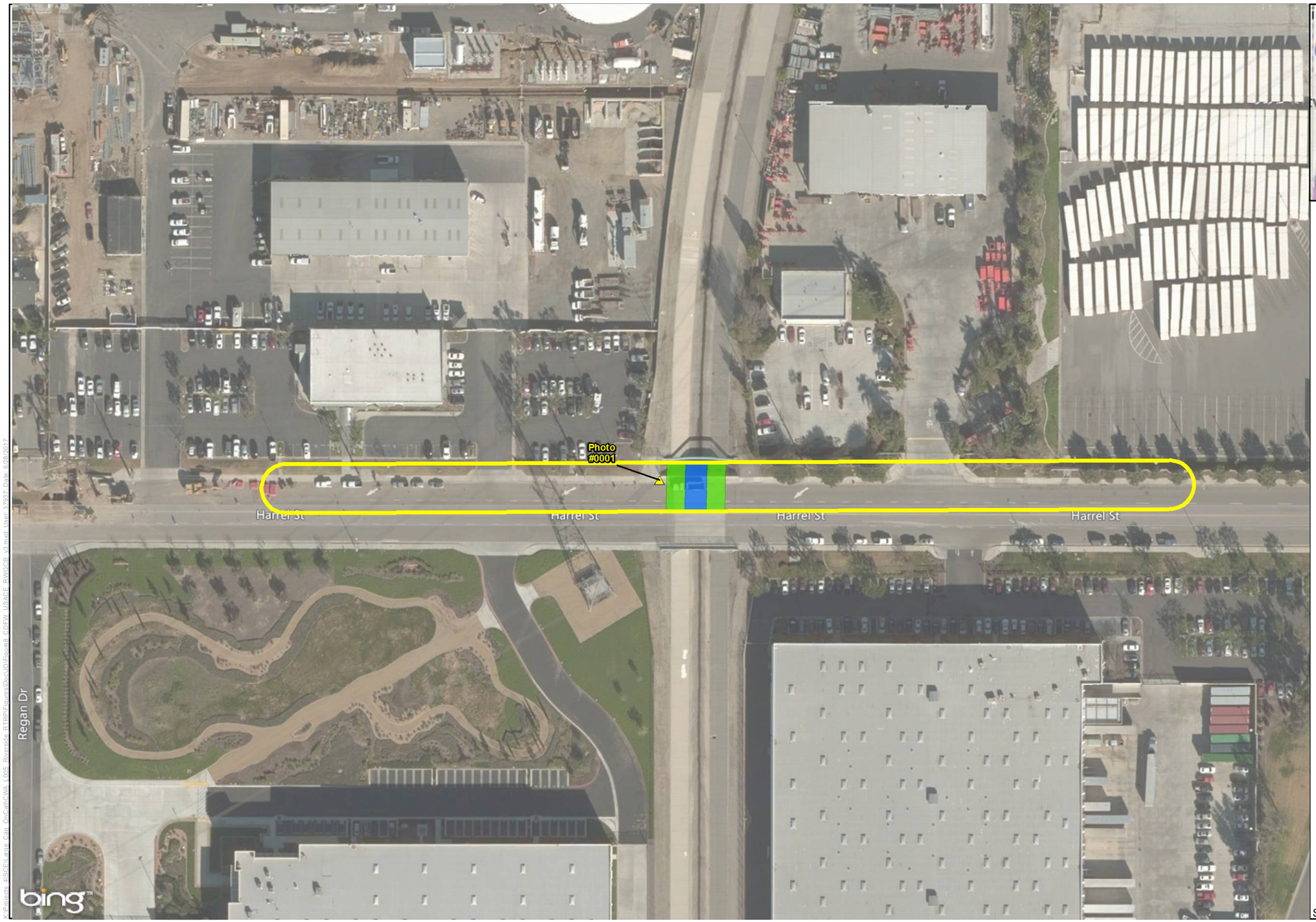
Soils

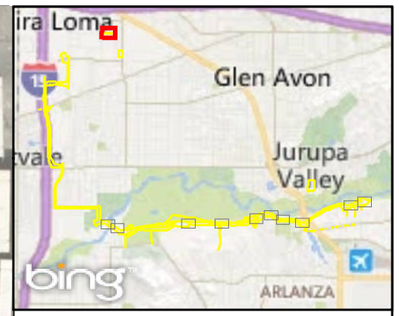
- BhC - Buchenau loam, slightly saline-alkali, 2 to 8 percent slopes
- ChF2 - Cieneba sandy loam, 15 to 50 percent slopes, eroded
- DgB - Dello loamy sand, 0 to 5 percent slopes
- DmA - Dello loamy sand, poorly drained, 0 to 2 percent slopes
- FaD2 - Fallbrook sandy loam, 8 to 15 percent slopes, eroded
- FfC2 - Fallbrook fine sandy loam, 2 to 8 percent slopes, eroded
- GhC - Gorgonio loamy sand, 0 to 8 percent slopes
- HcD2 - Hanford coarse sandy loam, 8 to 15 percent slopes, eroded
- MbC2 - Madera fine sandy loam, shallow, 2 to 8 percent slopes, eroded
- PtB - Porterville clay, moderately deep, slightly saline-alka li, 0 to 5 percent slopes
- TeG - Terrace escarpments

Source: Microsoft; USDA NRCS Soils

0 10,000 20,000 Feet
1:12,000

Figure 7, Sheet 5 of 5
Soils
Riverside Transmission Reliability Project





Legend

- Photo Points

Wetland Sample Points

- Upland
- Wetland
- Non-Jurisdictional Lines
- Survey Area
- Excluded from Survey

Agency Jurisdiction

- CDFW
- RWQCB
- USACE/RWQCB
- Wetlands

Source: Microsoft

0 100 200 Feet

1:1,200

Figure 8, Sheet 1 of 11
CDFW/USACE/RWQCB Jurisdictional Delineation Results
Riverside Transmission Reliability Project

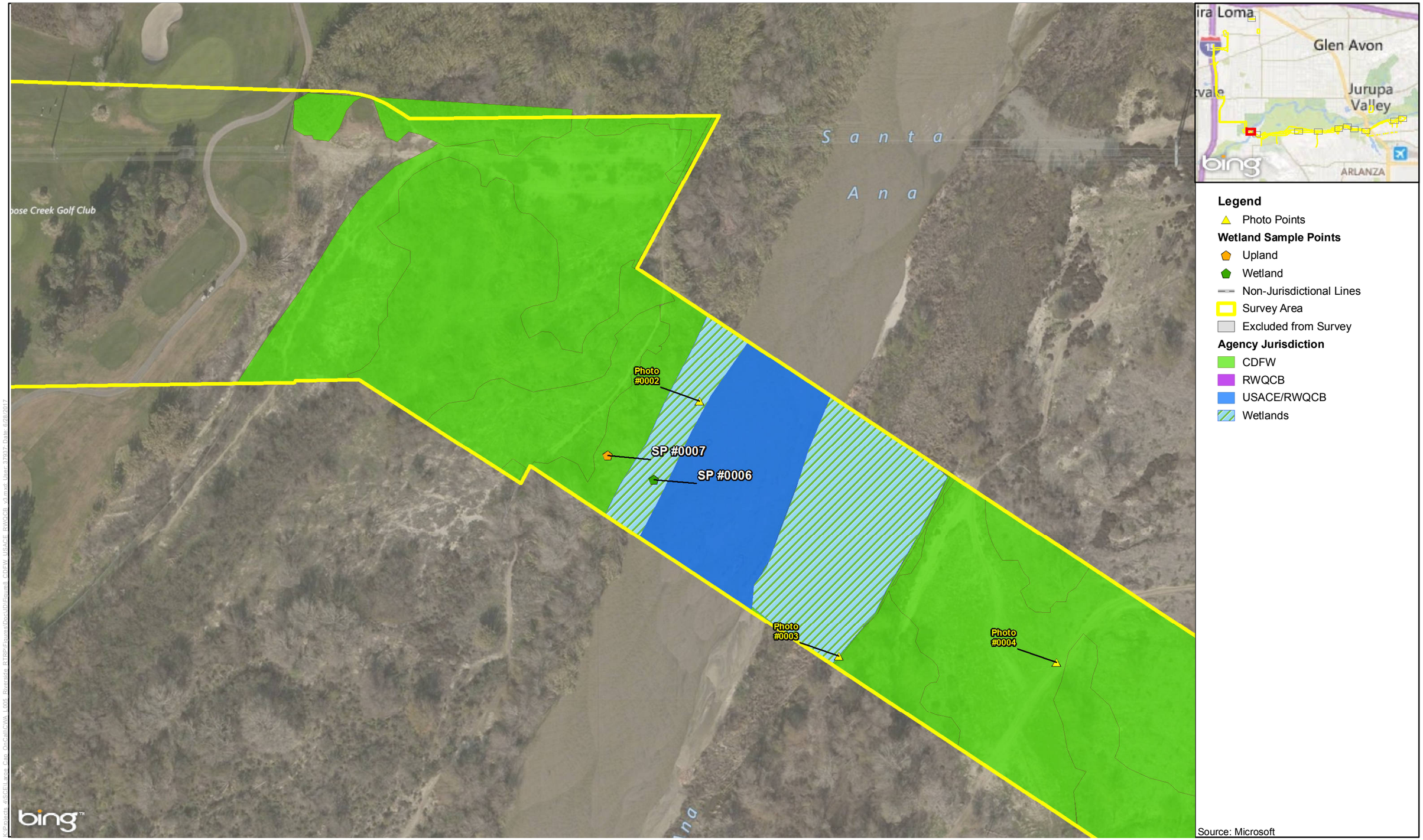
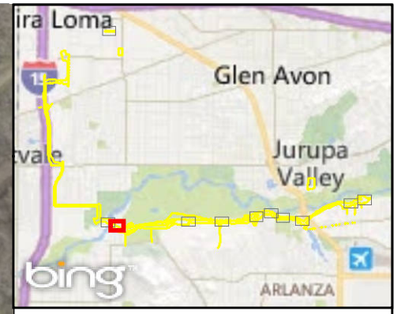


Figure 8, Sheet 2 of 11
CDFW/USACE/RWQCB Jurisdictional Delineation Results
Riverside Transmission Reliability Project



Legend

- Photo Points

Wetland Sample Points

- Upland
- Wetland
- Non-Jurisdictional Lines
- Survey Area
- Excluded from Survey

Agency Jurisdiction

- CDFW
- RWQCB
- USACE/RWQCB
- Wetlands

Source: Microsoft

0 100 200 Feet

1:1,200

Figure 8, Sheet 3 of 11
CDFW/USACE/RWQCB Jurisdictional Delineation Results
Riverside Transmission Reliability Project

Legend

- Photo Points

Wetland Sample Points

- Upland
- Wetland
- Non-Jurisdictional Lines
- Survey Area
- Excluded from Survey

Agency Jurisdiction

- CDFW
- RWQCB
- USACE/RWQCB
- Wetlands

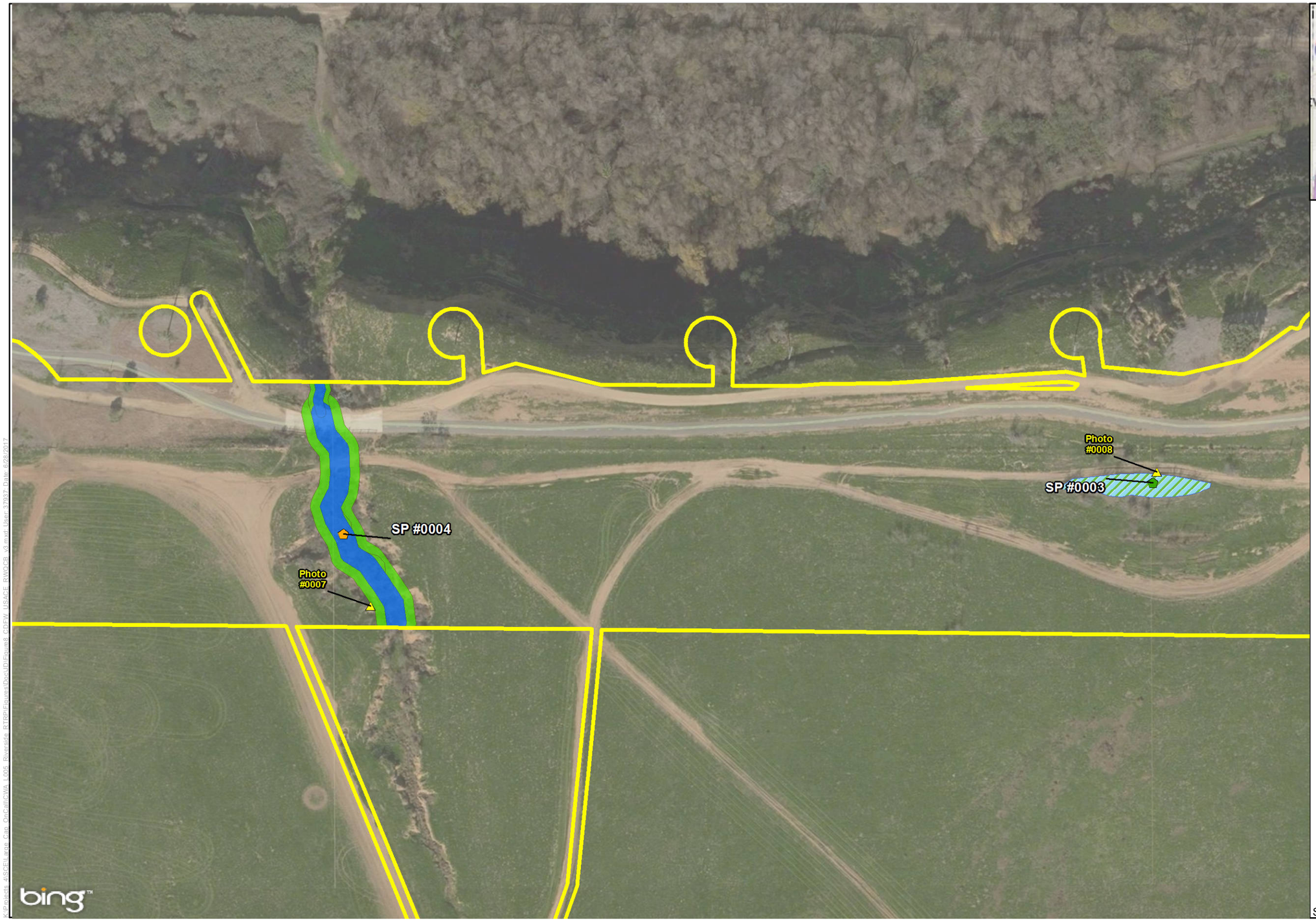
Source: Microsoft

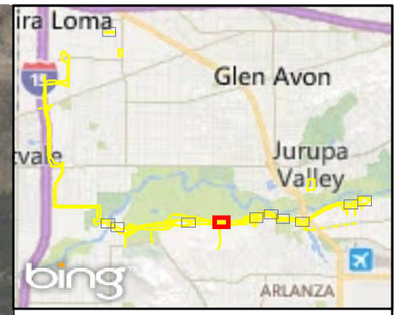
0 100 200 Feet

1:1,200

N

Figure 8, Sheet 4 of 11
CDFW/USACE/RWQCB Jurisdictional Delineation Results
Riverside Transmission Reliability Project





Legend

- Photo Points

Wetland Sample Points

- Upland
- Wetland
- Non-Jurisdictional Lines
- Survey Area
- Excluded from Survey

Agency Jurisdiction

- CDFW
- RWQCB
- USACE/RWQCB
- Wetlands

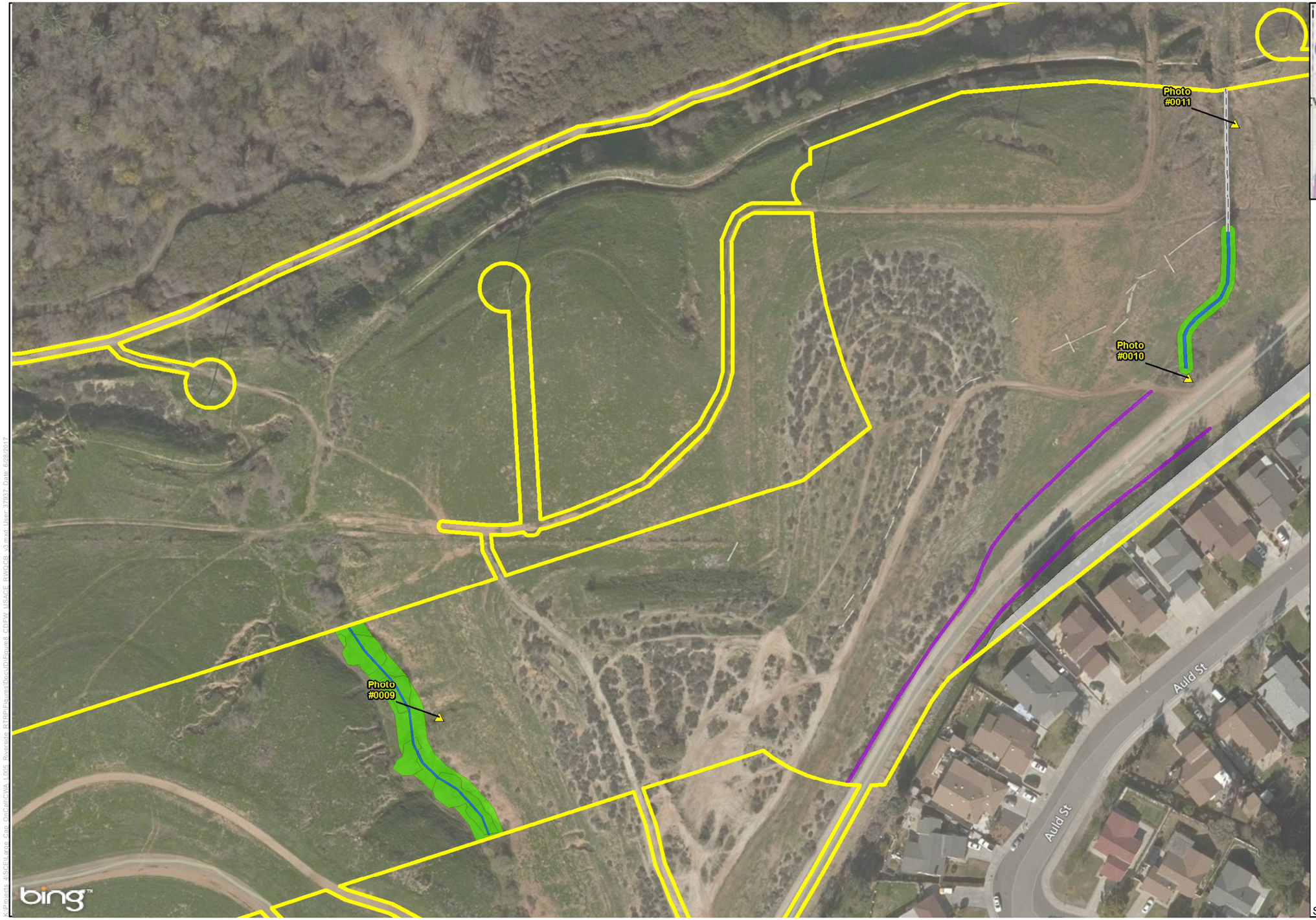
Source: Microsoft

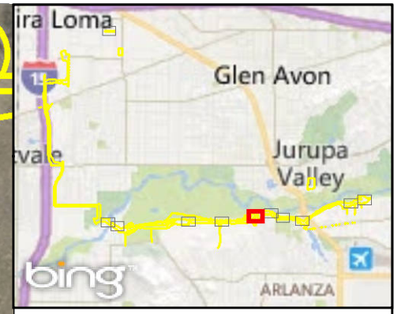
0 100 200 Feet

1:1,200

N

Figure 8, Sheet 5 of 11
CDFW/USACE/RWQCB Jurisdictional Delineation Results
Riverside Transmission Reliability Project





Legend

- Photo Points

Wetland Sample Points

- Upland
- Wetland
- Non-Jurisdictional Lines
- Survey Area
- Excluded from Survey

Agency Jurisdiction

- CDFW
- RWQCB
- USACE/RWQCB
- Wetlands

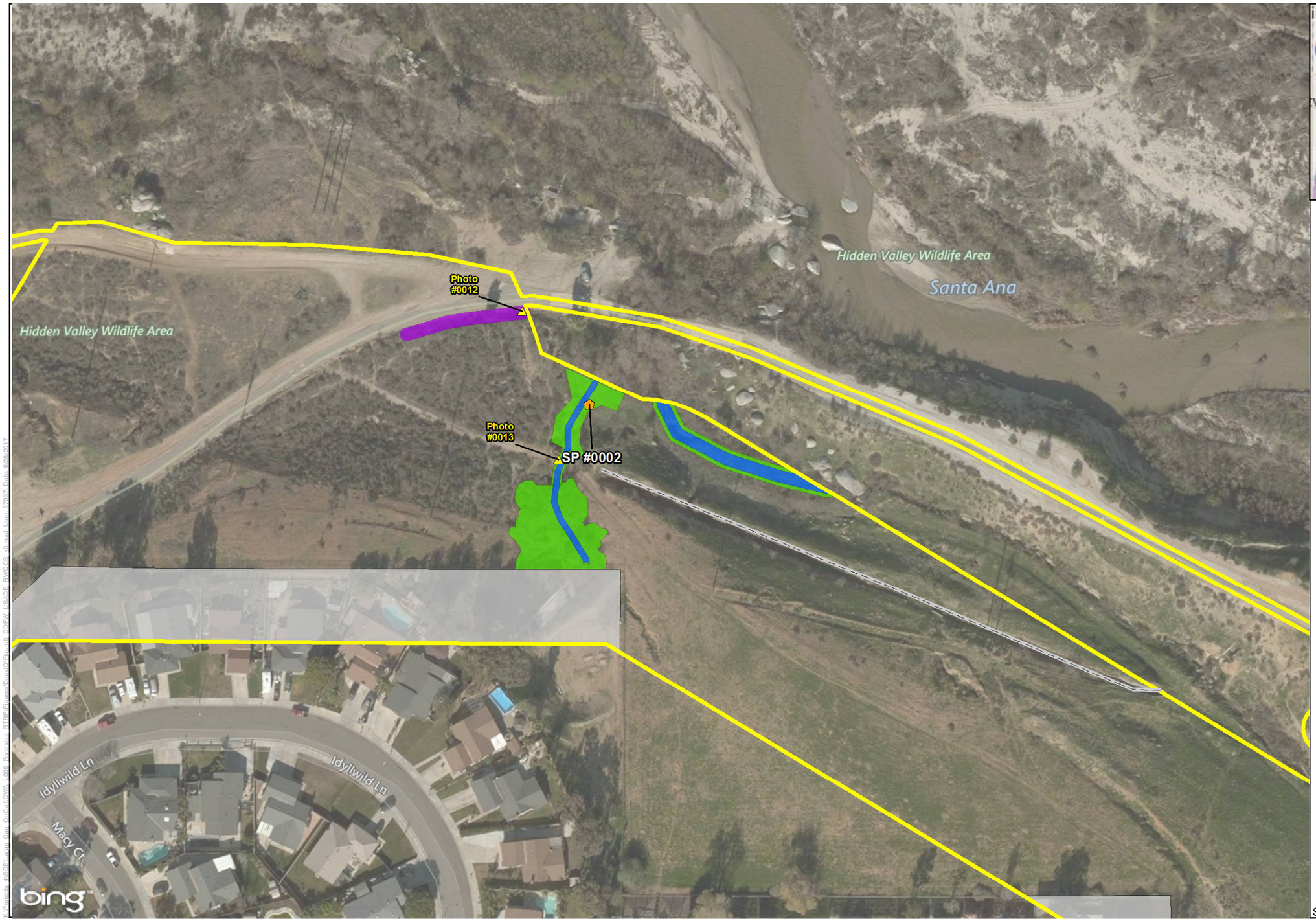
Source: Microsoft

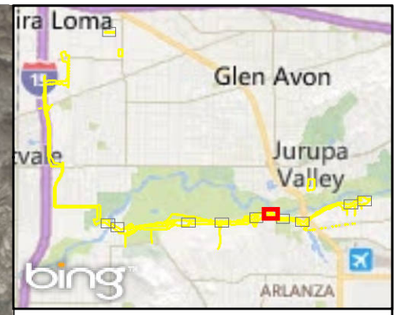
0 100 200 Feet

1:1,200

N

Figure 8, Sheet 6 of 11
CDFW/USACE/RWQCB Jurisdictional Delineation Results
Riverside Transmission Reliability Project





Legend

- Photo Points

Wetland Sample Points

- Upland
- Wetland
- Non-Jurisdictional Lines
- Survey Area
- Excluded from Survey

Agency Jurisdiction

- CDFW
- RWQCB
- USACE/RWQCB
- Wetlands

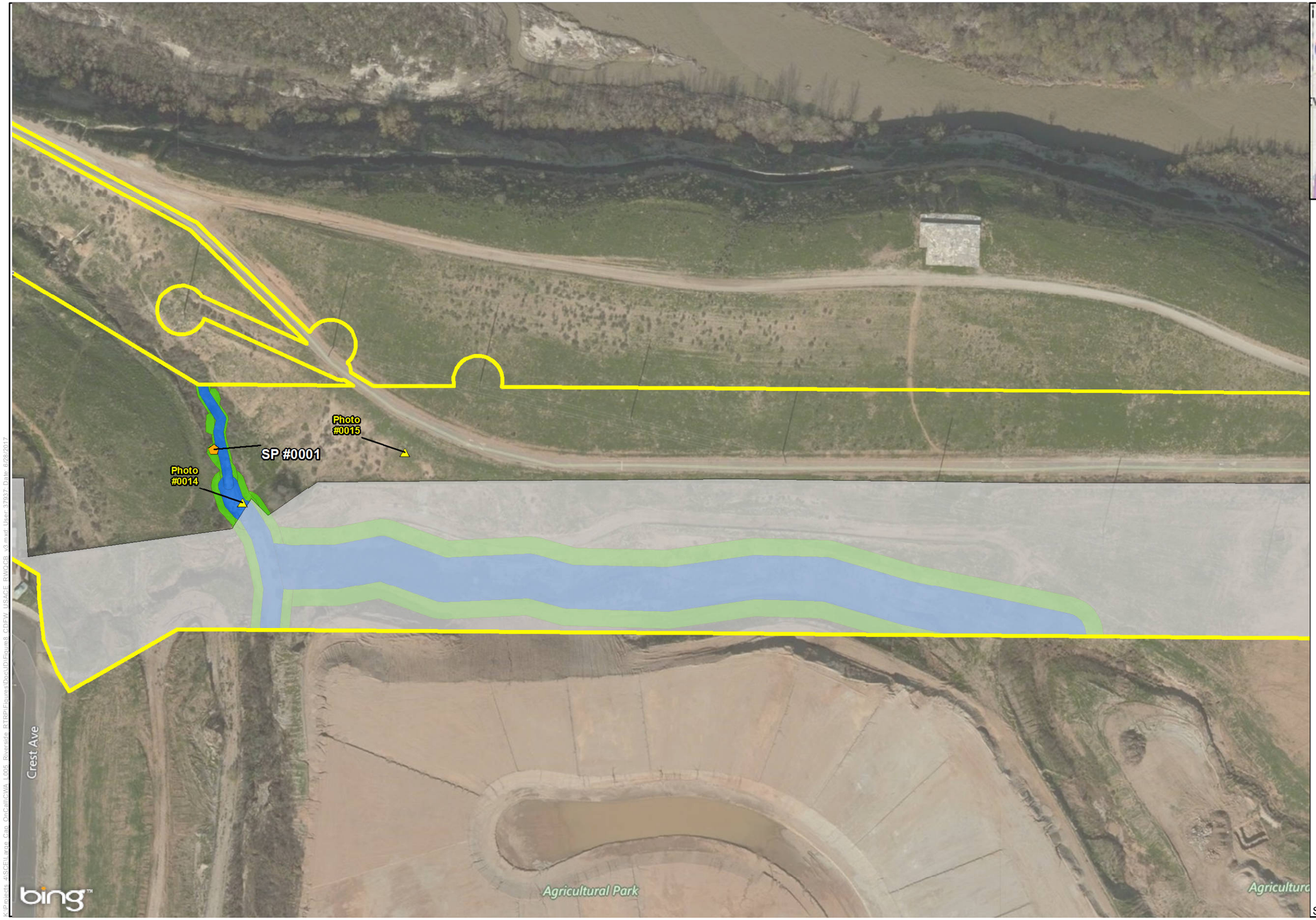
Source: Microsoft

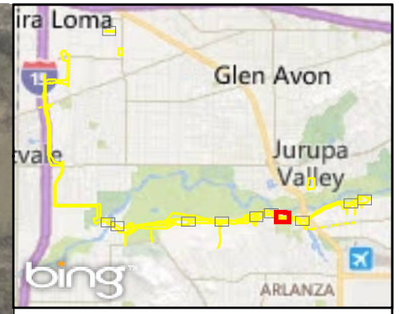
0 100 200 Feet

1:1,200

N

Figure 8, Sheet 7 of 11
CDFW/USACE/RWQCB Jurisdictional Delineation Results
Riverside Transmission Reliability Project





Legend

- Photo Points

Wetland Sample Points

- Upland
- Wetland
- Non-Jurisdictional Lines
- Survey Area
- Excluded from Survey

Agency Jurisdiction

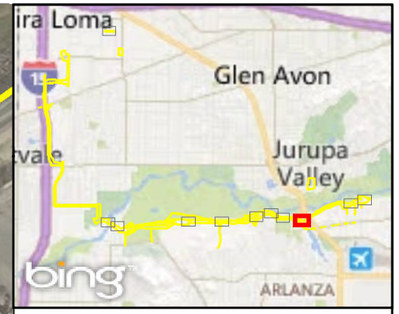
- CDFW
- RWQCB
- USACE/RWQCB
- Wetlands

Source: Microsoft

0 100 200 Feet

1:1,200

Figure 8, Sheet 8 of 11
CDFW/USACE/RWQCB Jurisdictional Delineation Results
Riverside Transmission Reliability Project



Legend

- Photo Points

Wetland Sample Points

- Upland
- Wetland
- Non-Jurisdictional Lines
- Survey Area
- Excluded from Survey

Agency Jurisdiction

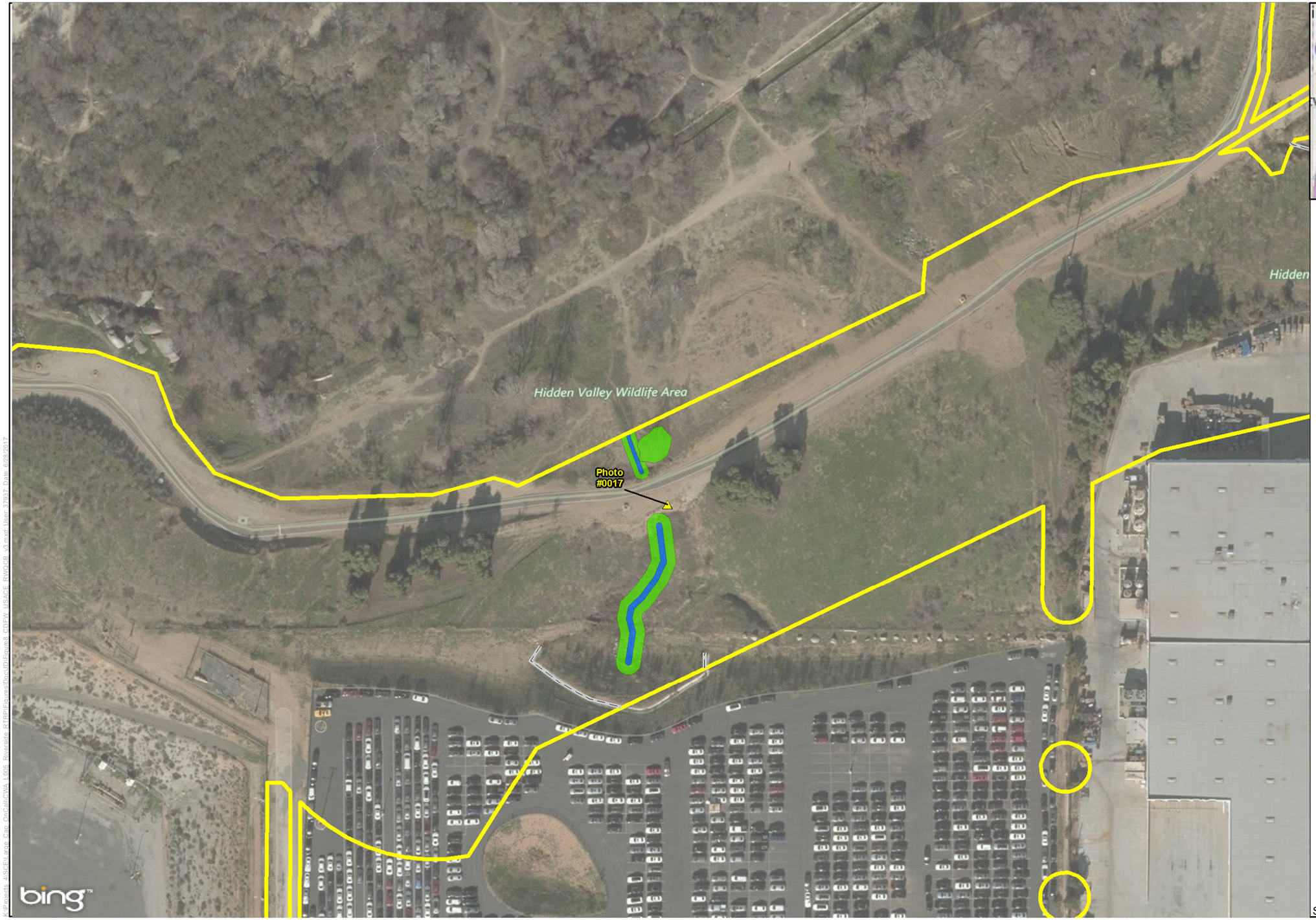
- CDFW
- RWQCB
- USACE/RWQCB
- Wetlands

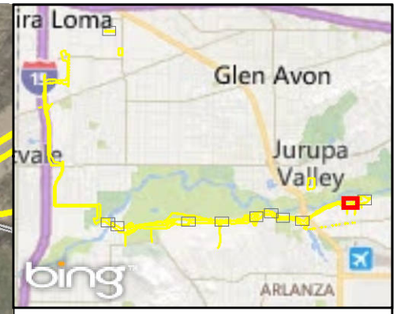
Source: Microsoft

0 100 200 Feet

1:1,200

Figure 8, Sheet 9 of 11
CDFW/USACE/RWQCB Jurisdictional Delineation Results
Riverside Transmission Reliability Project





Legend

- Photo Points

Wetland Sample Points

- Upland
- Wetland
- Non-Jurisdictional Lines
- Survey Area
- Excluded from Survey

Agency Jurisdiction

- CDFW
- RWQCB
- USACE/RWQCB
- Wetlands

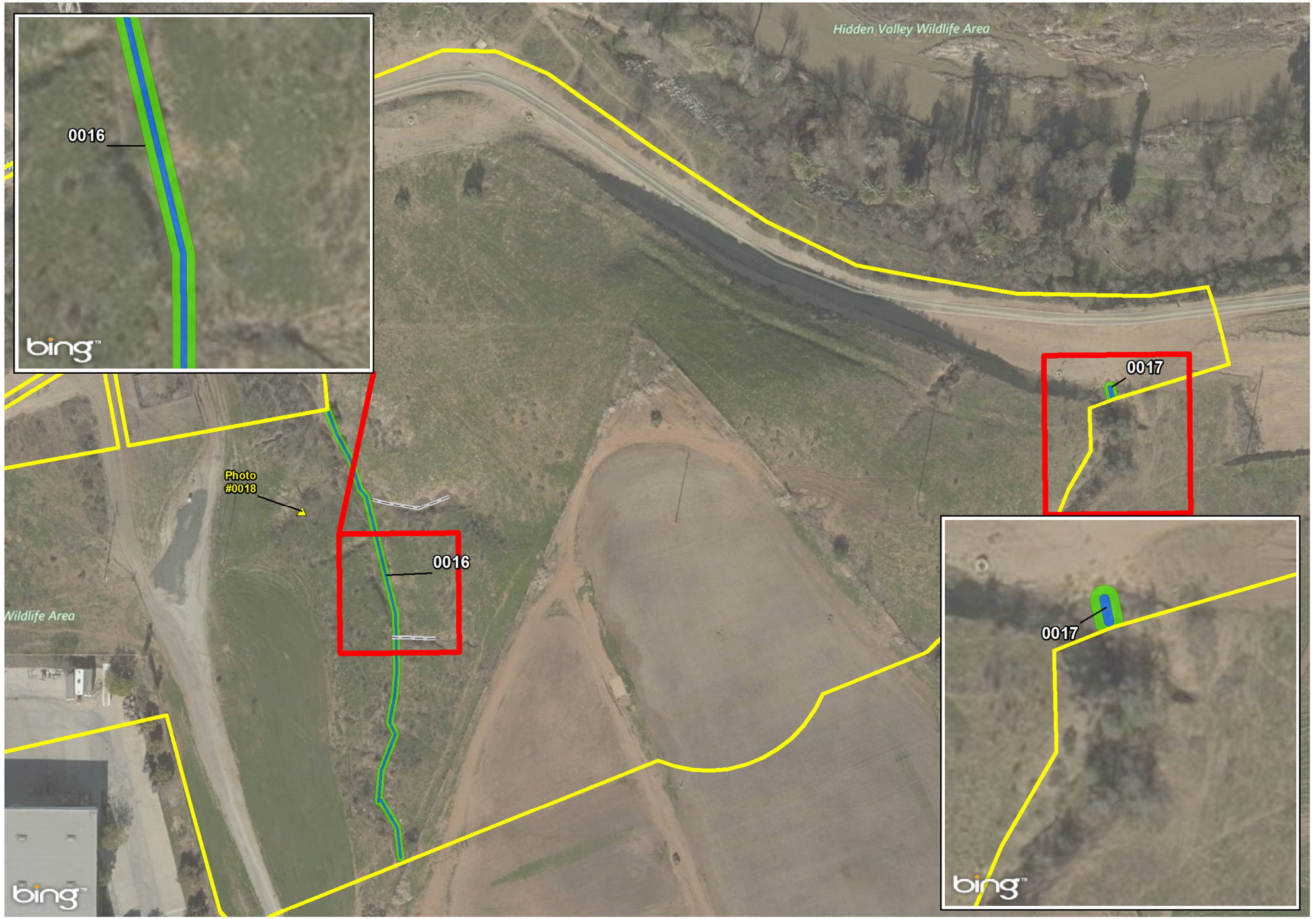
Source: Microsoft

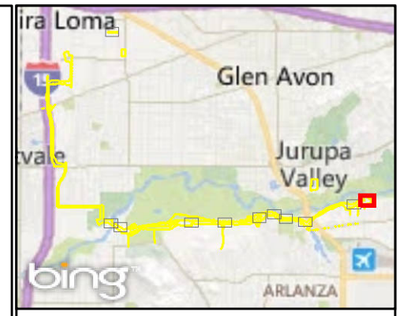
0 100 200 Feet

1:1,200

N

Figure 8, Sheet 10 of 11
CDFW/USACE/RWQCB Jurisdictional Delineation Results
Riverside Transmission Reliability Project





Legend

- Photo Points

Wetland Sample Points

- Upland
- Wetland
- Non-Jurisdictional Lines
- Survey Area
- Excluded from Survey

Agency Jurisdiction

- CDFW
- RWQCB
- USACE/RWQCB
- Wetlands

Source: Microsoft

0 100 200 Feet

1:1,200

Figure 8, Sheet 11 of 11
CDFW/USACE/RWQCB Jurisdictional Delineation Results
Riverside Transmission Reliability Project

Attachment 2

Photo Log

	Photo ID: 0001 Feature ID: 0001 Photo Date: 5/10/2017 Direction: East Description: Intermittent concrete-lined channel.
	Photo ID: 0002 Feature ID: 0002 Photo Date: 5/10/2017 Direction: South Description: View of open water portion of the Santa Ana River. Vegetation in the vicinity comprised of southern willow scrub and freshwater marsh.

	Photo ID: 0003 Feature ID: 0002 Photo Date: 5/11/2017 Direction: North Description: Perennial stream surrounded by freshwater marsh, within the OHWM of the Santa Ana River.
	Photo ID: 0004 Feature ID: 0002 Photo Date: 5/11/2017 Direction: East Description: View of the floodplain of the Santa Ana River. Soils are primarily sandy and vegetated with nonnative grasses, but also intermixed with southern willow scrub.

	Photo ID: 0005 Feature ID: 0002 Photo Date: 5/10/2017 Direction: Northwest Description: Wetland area within drainage of the Santa Ana River floodplain. Dominated by hydrophytic vegetation, including southern cattail (*Typha domingensis*, OBL), wild grape (*Vitis girdiana*, FAC), black willow (*Salix goodingii*, FACW), and giant reed (*Arundo donax*, FACW). Drainage inundated during site visit.
	Photo ID: 0006 Feature ID: 0003 Photo Date: 5/10/2017 Direction: South Description: View of ephemeral drainage and riparian woodland.

	Photo ID: 0007 Feature ID: 0004 Photo Date: 5/11/2017 Direction: North Description: Ephemeral stream surrounded by southern willow scrub.
	Photo ID: 0008 Feature ID: 0005 Photo Date: 5/11/2017 Direction: West Description: Depressional area that ponds seasonally. Soil cracks observed along with mulefat scrub vegetation.

	Photo ID: 0009 Feature ID: 0006 Photo Date: 5/11/2017 Direction: West Description: Ephemeral stream surrounded by nonnative grasses and riparian scrub dominated by Mexican elderberry (*Sambucus nigra*, FAC).
	Photo ID: 0010 Feature ID: 0009 Photo Date: 5/10/2017 Direction: North Description: Ephemeral drainage surrounded by nonnative vegetation, including black mustard (NL), summer mustard (NL), tree tobacco (FAC), and black elderberry (FAC).

	Photo ID: 0011 Feature ID: Non-jurisdictional Photo Date: 5/10/2017 Direction: North Description: Black pipe appears to convey the ephemeral flows from Feature 0009 to the Santa Ana River. No OHWM indicators or TOB was observed.
	Photo ID: 0012 Feature ID: 0010 Photo Date: 5/11/2017 Direction: West Description: Ephemeral armored riprap ditch, anthropogenically disturbed.

	Photo ID: 0013 Feature ID: 0011 Photo Date: 5/11/2017 Direction: Northeast Description: Ephemeral stream surrounded by southern willow scrub.
	Photo ID: 0014 Feature ID: 0012 Photo Date: 5/11/2017 Direction: Northwest Description: Looking downstream at ephemeral stream surrounded by mule fat scrub.

	Photo ID: 0015 Feature ID: 0012 and 0013 Photo Date: 5/11/2017 Direction: Southwest Description: Looking at confluence of two ephemeral streams. Streams occur within an active construction area. The stream has been anthropogenically disturbed by construction including, the installation of water quality basins.
	Photo ID: 0016 Feature ID: Feature 0014 Photo Date: August 10, 2016 Direction: West Description: View of the perennial channel from TOB.

	Photo ID: 0017 Feature ID: 0015 Photo Date: 5/10/2017 Direction: South Description: Ephemeral stream surrounded by nonnative grassland. Dominated by dense black mustard (*Brassica nigra*).
	Photo ID: 0018 Feature ID: 0016 Photo Date: 5/10/2017 Direction: North Description: Ephemeral stream surrounded by nonnative grassland. Vegetation within the channel comprised of nonnative species, including tree tobacco (*Nicotana glauca*, FAC) and castor bean (*Ricinus communis*, FACU).

Attachment 3

Wetland Determination Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: ~~BR~~ RTRP Cuyamos City/County: Riverside County Sampling Date: 5/18/17

Applicant/Owner: SCE State: CA Sampling Point: SP-1

Investigator(s): M. Flores, D Miller Section, Township, Range:

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

Subregion (LRR): C Lat: 33.96168752 Long: -117.47395878 Datum:

Soil Map Unit Name: Terrace Escarpments NWI classification:

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. Baccharis salicifolia	15	Y	FACW
2. Ricinus communis	20	Y	FACU
3.			
4.			
5.			
	35 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Polypogon monspeliensis	4	Y	FACW
2. Brassica nigra	1	N	UPL
3. Conium maculatum	3	Y	FACW
4.			
5.			
6.			
7.			
8.			
	8 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1. N/A			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 90 % 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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

SOIL

Sampling Point: SP 1

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 %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-1	10YR 3/4	100					loam	
1-8	10YR 4/4	100					sand	
8-16	10YR 3/4	60					loamy sand	
8-16	10YR 4/4	40					sand	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes X No _____

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

Remarks: Surface water observed during site visit on 5/10/17. No water at sample pt during sampling however some pooling in channel 15 ft upstream.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RTPP CWA 005 City/County: Riverside Sampling Date: 5/18/17

Applicant/Owner: SCE State: CA Sampling Point: SP2

Investigator(s): M. Flores, B Muller Section, Township, Range:

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

Subregion (LRR): C Lat: 33.9622 99471 Long: -117.4765 3923 Datum:

Soil Map Unit Name: Terrace escarpments NWI classification:

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30)			
1. Salix gooddingii	45	Y	FACW
2.			
3.			
4.			
	45 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Brassica nigra	5	N	UPL
2. Conium maculatum	15	N	FACW
3. Bromus diandrus	52	Y	FACU
4. Stephanomeria	3	N	NI
5. Cirsium vulgare	10	N	FACU
6.			
7.			
8.			
	85 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 15% % Cover of Biotic Crust 0

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 60	x 2 = 120
FAC species 6	x 3 = 6
FACU species 62	x 4 = 248
UPL species 5	x 5 = 25
Column Totals: 127 (A)	399 (B)

Prevalence Index = B/A = 3.09

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: mostly upland associated species in channel. ~~Bottom~~ Salix is a single mature tree downstream of sample area.

SOIL

Sampling Point: SP2

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)
- X Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

no access into channel due to very deep, steep slopes
Soils appear sandy which is consistent with SP-1, not problematic

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

visible bed and bank. Fresh splays of sand deposited in low flow

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RTRP CWA 05 City/County: Riverside County Sampling Date: 5/18/17

Applicant/Owner: SCE State: CA Sampling Point: SP3

Investigator(s): M. Flores, D. Miller Section, Township, Range:

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

Subregion (LRR): C Lat: 33.96043842 Long: -117.49054422 Datum:

Soil Map Unit Name: Arlington loam, 0 to 5 percent slopes NWI classification:

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

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

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

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

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

Remarks: * Depression area holds water for portion of year. Appears formed by old road ruts. Hydric soils are assumed due to potential habitat for listed fairy shrimp.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Baccharis salicifolia	35	Y	FACW
2.			
3.			
4.			
5.			
	35 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Sisymbrium irio	10	Y	FACU
2. Hordeum murinum	4	N	FACU
3. Rumex crispus	15	Y	FAC
4. Chenopodium murale	5	N	FACU
5. Bromus diandrus	3	N	FACU
6. Polygonum arenastrum	5	N	NI
7.			
8.			
	47 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 53 % Cover of Biotic Crust

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? Yes D No

Remarks:

SOIL

Sampling Point: _____

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

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

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X* No _____

Remarks: no sample taken due to potential habitat for listed fairy shrimp. Hydric soils assumed 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)**
- X Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes X No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RTRP CWA 1005 City/County: Riverside County Sampling Date: 5/18/17

Applicant/Owner: State: CA Sampling Point: SP4

Investigator(s): M. Flores, D. Miller Section, Township, Range:

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

Subregion (LRR): C Lat: 33.96030608 Long: -117.4932.6279 Datum:

Soil Map Unit Name: Terrace escarpments NWI classification:

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

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes Y No

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Nicotiana glauca	12	Y	FAC
2.			
3.			
4.			
	12 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Baccharis salicifolia	80%	Y	FACW
2. Artemisia californica	5%	N	NI
3.			
4.			
5.			
	85 = Total Cover		
Herb Stratum (Plot size:)			
1. Conium maculatum	2	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	2 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 98% % 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 X No

Remarks:

SOIL

Sampling Point: SP4

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
0-1	7.5YR 3/2	60					loam	
1-14	10YR 3/2	40					loam	
14-16	10YR 3/2	100					loam	
							loamy sand	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

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)**
- X 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 X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RTRP CWA 005 City/County: Riverside Sampling Date: 5/18/17
Applicant/Owner: SCE State: _____ Sampling Point: SP5
Investigator(s): M. Flores D. Miller Section, Township, Range: _____
Landform (hillslope, terrace, etc.): drainage Local relief (concave, convex, none): concave Slope (%): <1
Subregion (LRR): C Lat: 33.94051331 Long: -117.50303149 Datum: _____
Soil Map Unit Name: Terrace Escarpments NWI classification: _____
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix goodingii	80	Y	
2.			
3.			
4.			
	80 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = 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:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

Remarks: no shrub or herb stratum in drainage
4-5 inches of woody debris in channel bottom

SOIL

Sampling Point: SP5

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
0-16	7.5 3/3	100					loam	20% undecomposed organic matter at top of sample pit.

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

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)**
- X 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 X

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

Remarks: Drainage has approx 4-5 inches of woody debris.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: RTRP CWA 005 City/County: Riverside County Sampling Date: 5/18/17

Applicant/Owner: SCE State: CA Sampling Point: SP-6

Investigator(s): M. Ayres & Miller Section, Township, Range:

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

Subregion (LRR): C Lat: 33.959909 Long: -117.5287 9483 Datum:

Soil Map Unit Name: Delhi loamy sand, poorly drained, 0 to 2 percent NWI classification:

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

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

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

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

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

Remarks: Sample at low point on terrace of River where top layer of sand has been removed by hydrology.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1. Salix gooddingii	40	Y	FACW
2.			
3.			
4.			
= Total Cover			
Sapling/Shrub Stratum (Plot size:)			
1. Arundo donax	10	Y	FACW
2.			
3.			
4.			
5.			
= Total Cover			
Herb Stratum (Plot size: 5)			
1. ~~Polygonum lapathifolium~~	~~18~~	~~Y~~	
2. Typha domingensis	20	Y	OBL
3. Veronica anagallis-aquatica	10	N	OBL
4. Xanthium strumarium	20	Y	FAC
5. Melilotus sp.	5	N	?
6. Seepmonkey flower - Mimulus guttatus		N	OBL
7. Persicaria lapathifolia	18	Y	FACW
8.			
74 = Total Cover			
Woody Vine Stratum (Plot size:)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 26 % Cover of Biotic Crust 0

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:

X Dominance Test is >50%

__ Prevalence Index is ≤3.0[1]

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

__ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No

Remarks:

Δh=0 Value ΔO · chroma Δ3 Distinct

SOIL

Sampling Point: SP 16

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
0-1	~~10YR 4/2~~		organics	(undecomposed)			~~loamy sand~~	
1-16	10YR 3/1	98	10YR 3/4	2	RM	PL	loamy sand	Distinct

[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)
- X Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

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

Remarks: Redox = Distinct ; starts w/in 1 inch & at least 15" thick in this sample

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes X No ___

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SCE RTRP CWA005 City/County: Riverside County Sampling Date: 5/18/17

Applicant/Owner: SCE State: CA Sampling Point: SP-7

Investigator(s): Marisa Flores Section, Township, Range:

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

Subregion (LRR): C Lat: 33.959985 Long: -117.528933 Datum:

Soil Map Unit Name: Dello loamy sand, poorly drained, 0 to 2 percent NWI classification:

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

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes Y No

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 35')	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix gooddingii	45	Y	FACW
2.			
3.			
4.			
	45 = Total Cover		

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

Herb Stratum (Plot size: 5')			
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:

X Dominance Test is >50%

__ Prevalence Index is ≤3.0[1]

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

__ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No

Remarks: Nonnative grassland at edge of riparian, but outside

SOIL

Sampling Point: SP7

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

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

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: Soils comprised of sand, no color taken

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 X Depth (inches): _____

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

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks: No hydrology indicators present