

Aquatic Resources Delineation

Wildomar Master Drainage Plan Lateral C Revision Project

Riverside County, California

Prepared For:



Riverside County Flood Control and
Water Conservation District
1995 Market Street
Riverside, California 92501

May 18, 2020



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LIST OF ACRONYMS AND ABBREVIATIONS

CDFW	California Department of Fish and Wildlife
CFR	Code of Federal Regulations
County	Riverside County
CWA	Clean Water Act
CWR	Clean Water Rule
DA	Delineation Area

LIST OF ACRONYMS AND ABBREVIATIONS

DBESP	Determination of Biologically Equivalent or Superior Preservation
District	Riverside County Flood Control and Water Conservation District
ESA	Federal Endangered Species Act
FAC	Facultative Species
FACW	Facultative Wetland Species
FACU	Facultative Upland Species
FR	Federal Register
I-	Interstate
JD	Jurisdictional Determination
MDP	Master Drainage Plan
MSHCP	Western Riverside Multiple Species Habitat Conservation Plan
N/L	Not Listed Plant Species
NPDES	National Pollutant Discharge Elimination System
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OBL	Obligate Wetland Species
OHWM	Ordinary High Water Mark
RHA	Rivers and Harbors Act of 1899
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SR-	State Route
SWRCB	State Water Resources Control Board
TNW	Traditional Navigable Waters
UPL	Upland Plant Species
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

1.0 INTRODUCTION

ECORP Consulting, Inc. conducted an aquatic resources delineation for the ±19-acre Wildomar Master Drainage Plan (MDP) Lateral C Revision Project on behalf of the Riverside County (County) Flood Control and Water Conservation District (District) located in Riverside County, California. The purpose of this project is to alleviate flood potential within the City of Wildomar, specifically by revising the original proposed MDP Lateral C facility. The Delineation Area (DA) consists of two vacant parcels totaling ±19 acres, situated on the southeast corner of Bundy Canyon Road and Monte Vista Drive, Bundy Canyon Wash south of these parcels, and locations of Lateral C (mainline) and two planned laterals: Lateral C-2 and Lateral C-3 (Figure 1. *Project Location*).

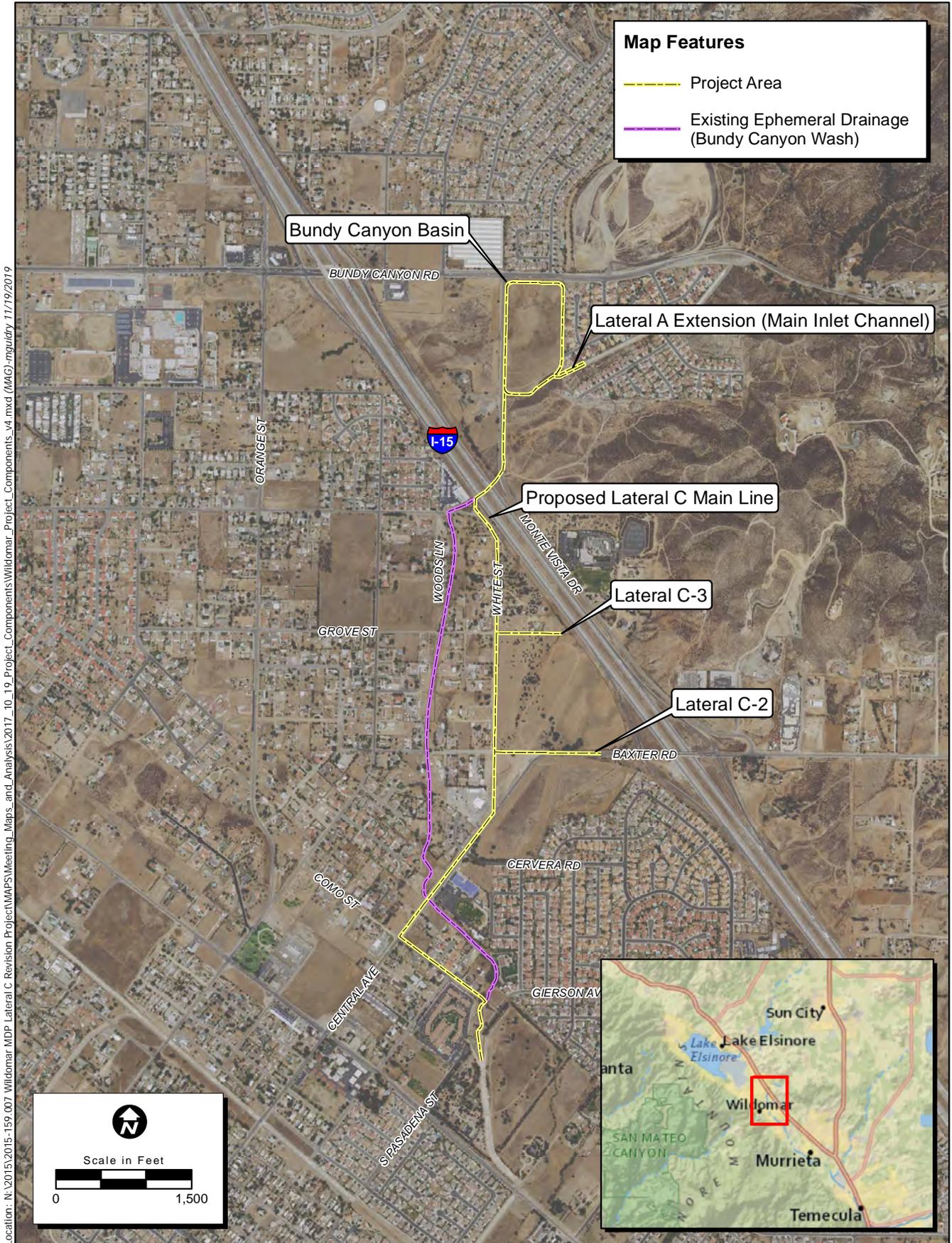
The DA is located in Sections 26 and 35 of Township 6 South, Range 4 West (San Bernardino Base and Meridian) as depicted on the "Wildomar, California" and "Lake Elsinore, California" 7.5-minute quadrangles (U.S. Geological Survey [USGS] 1993a and b, respectively, Figure 2. *USGS Map*). The approximate center of the DA is located at 33.624434° latitude and -117.265513° longitude within the Santa Margarita Watershed (Hydrologic Unit Code #18070302) and the San Jacinto Watershed (Hydrologic Unit Code #18070202, Natural Resources Conservation Service [NRCS], et al. 2016).

The DA is accessible from Los Angeles from U.S. Highway 101 south for approximately one mile south to Interstate (I-) 10 east. From I-10, proceed east for 25 miles to State Route (SR-) 71 going south, then 16 miles south to SR-91 east. After another four miles on SR-91, exit onto I-15 south and travel for 26 miles to exit onto Bundy Canyon Road (Exit 71) east and turn right onto Monte Vista Road. The northernmost part of the DA is on the right.

This report describes aquatic resources identified within the DA that may be regulated by the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the federal Clean Water Act (CWA). The information presented in this report provides data required by the USACE Los Angeles District's Minimum Standards for Acceptance of Aquatic Resources Delineation Reports (USACE 2017). The aquatic resources boundaries depicted in this report represent a calculated estimation of the jurisdictional area within the DA and are subject to the USACE verification process.

For the preparation of this study and, in particular, the locations and extent of previously delineated jurisdictional resources in the DA, the following documents were reviewed:

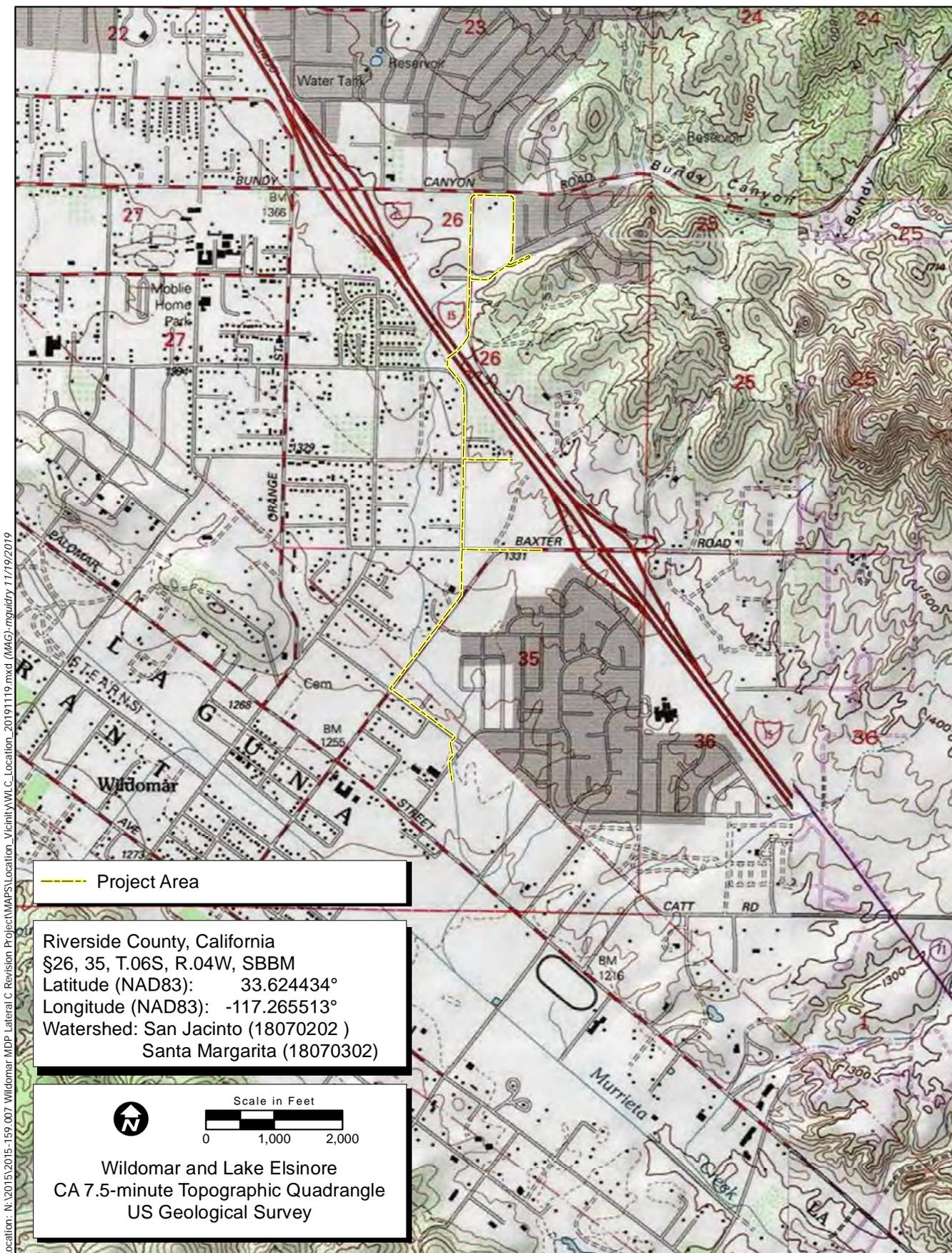
- Baxter Village Mixed Use Project – Draft Environmental Impact Report (LSA 2015)
- Baxter Village Mixed Use Project – Final Environmental Impact Report (LSA 2016)
- Bundy Canyon Road/Scott Road Improvement Project – Final Environmental Impact Report (Parsons 2014)
- Wildomar Walmart Project – Draft Environmental Impact Report (Applied Planning, Inc. 2014a)
- Wildomar Walmart Project – Final Environmental Impact Report (Applied Planning, Inc. 2014b)



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Map Date: 11/19/2019
 Photo Source: ESRI

Figure 1. Project Location



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Map Date: 11/19/2019

Figure 2. USGS Map

2.0 REGULATORY SETTING

2.1 Waters of the United States

This report describes aquatic resources, including wetlands that may be regulated by USACE under Section 404 of the federal CWA. The following sections define these regulations.

2.1.1 Wetlands

Wetlands are “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” [51 Federal Register (FR) 41250, Nov. 13, 1986, as amended at 58 FR 45036, Aug. 25, 1993]. Wetlands can be perennial or intermittent.

2.1.2 Other Waters

Other waters are nontidal, perennial, and intermittent watercourses and tributaries to such watercourses [51 FR 41250, Nov. 13, 1986, as amended at 58 FR 45036, August 25, 1993]. The limit of USACE jurisdiction for nontidal watercourses (without adjacent wetlands) is defined in 33 Code of Federal Regulations (CFR) 328.4(c)(1) as the “ordinary high water mark” (OHWM). The OHWM is defined as the “line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” approximation of the lateral limit of USACE jurisdiction. The upstream limits of other waters are defined as the point where the OHWM is no longer perceptible.

2.2 Clean Water Act

The USACE regulates discharge of dredged or fill material into Waters of the U.S. under Section 404 of the CWA. “Discharges of fill material” is defined as the addition of fill material into Waters of the U.S., including, but not limited to the following: placement of fill necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes, and subaqueous utility lines [33 CFR § 328.2(f)]. In addition, Section 401 of the CWA (33 U.S. Code 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into Waters of the U.S. to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

Substantial impacts to wetlands, more than 0.5 acre of impact, may require an individual permit. Projects that only minimally affect wetlands, less than 0.5 acre of impact, may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the local Regional Water Quality Control Board (RWQCB) under the authority of the State Water Resources Control Board (SWRCB).

2.3 Clean Water Rule

The Clean Water Rule (CWR) was published in June 2015, but implementation of the rule was stayed until September 2018. At the time of the field work, the CWR was in effect for 22 states, including California, the District of Columbia, and the U.S. territories. The CWR establishes categories of waters that are jurisdictional, waters that are excluded, and waters that require a case-specific significant nexus evaluation to determine if they are Waters of the U.S. By rule, the CWR defines Waters of the U.S. to include traditional navigable waters (TNW), interstate waters, territorial seas, impoundments of jurisdictional waters, and tributaries and adjacent (i.e., bordering, contiguous, or neighboring) waters to TNW, interstate waters, or territorial seas (USACE and U.S. Environmental Protection Agency 2015).

According to the CWR, neighboring is defined as waters located: within 100 feet of the OHWM of a jurisdictional feature, within the 100-year floodplain of a jurisdictional feature and within 1,500 feet of the feature, or within 1,500 feet of the high tide line of TNW, interstate water, or territorial sea. Western vernal pools in California and several other location-specific aquatic feature types are evaluated on a case-by-case basis to determine whether they have a significant nexus to TNW, interstate waters, or territorial seas (USACE and USEPA 2015).

Feature types that are categorically excluded from CWA jurisdiction include waste treatment systems, prior converted cropland, ditches with intermittent or ephemeral flow that are not relocated tributaries or excavated in a tributary, ditches that do not flow, directly or indirectly, into a jurisdictional water, artificially irrigated areas that would revert to dry land in the absence of irrigation, artificial, constructed lakes or ponds created by excavating and/or diking dry land, small ornamental waters, artificial reflecting or swimming pools created by excavating and/or diking dry land, water-filled depressions created in dry land incidental to mining or construction activities, erosional features such as gullies, rills, and other ephemeral features that do not meet the definition of tributary, non-wetland swales, and lawfully constructed grassed waterways, and puddles (USACE and USEPA 2015).

On October 22, 2019, the USEPA and the USACE published a final rule to repeal the CWR, which amended portions of the CFR, and to restore the regulatory text that existed prior to the CWR. The final rule became effective on December 23, 2019.

2.4 Porter Cologne Water Quality Control Act

The SWRCB implements water quality regulations under the federal CWA and the Porter-Cologne Water Quality Control Act. These regulations require compliance with the National Pollutant Discharge Elimination System (NPDES), including compliance with the California Storm Water NPDES General Construction Permit for discharges of storm water runoff associated with construction activities. General Construction Permits for projects that disturb one or more acres of land require development and implementation of a Storm Water Pollution Prevention Plan. Under the Porter-Cologne Water Quality Control Act, the SWRCB regulates actions that would involve “discharging waste, or proposing to discharge waste, with any region that could affect the water of the state” (Water Code 13260[a]).

2.4.1 Waters of the State

Waters of the State are defined as “any surface water or groundwater, including saline waters, within the boundaries of the state” (Water Code 13050[e]). The SWRCB regulates all such activities, as well as dredging, filling, or discharging materials into Waters of the State that are not regulated by the USACE due to a lack of connectivity with a navigable water body. The SWRCB may require issuance of Waste Discharge Requirements for these activities.

On April 2, 2019, the SWRCB adopted the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (referred to as the Procedures) for inclusion in the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California (Resolution No. 2019-0015). The new Procedures include the following:

- Definition of wetlands and aquatic resources that are Waters of the State;
- Description of application requirements for individual orders (not general orders) for water quality certification, or waste discharge requirements;
- Description of information required in compensatory mitigation plans; and
- Definition of exemptions to application procedures.

The Office of Administrative Law approved the procedures on August 28, 2019, and the rule goes into effect May 28, 2020. It is as yet unknown how this new set of procedures will be implemented at the project level.

2.5 Section 1600 of the State of California Fish and Game Code

Under Section 1600 of the California Fish and Game Code, the California Department of Fish and Wildlife (CDFW) regulates projects that propose to (1) divert, obstruct, or change the natural flow or the bed, channel, or bank of any river, stream, or lake designated by the department in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit, (2) use material from the streambeds designated by the department, or (3) result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake designated by the CDFW. If an existing fish or wildlife resource may be substantially adversely affected by that construction, CDFW shall notify the governmental agency or public utility of the existence of the fish or wildlife resource together with a description thereof and shall propose reasonable modifications in the proposed construction that will allow for the protection and continuance of the fish or wildlife resource, including procedures to review the operation of those protective measures.

It should be noted that within the California Code of Regulations a streambed is defined as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supporting fish or other aquatic life” (Title 14, § 1.72). The definition further states “This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation”

(ibid.). This definition does not supersede or replace the definition within Section 1600, but rather is additive to it.

Projects that affect the CDFW jurisdictional areas must submit a Notification of Lake or Streambed Alteration to their local office of the CDFW for processing. CDFW reviews the proposed actions and, if necessary, submits proposed measures to protect affected fish and wildlife resources to the Applicant. The final proposal that is mutually agreed upon by CDFW and the Applicant is the Streambed Alteration Agreement (SAA). Projects that require a SAA often also require a permit from the USACE under Section 404 of the CWA. In these instances, the conditions of the Section 404 permit and the SAA overlap.

2.6 Western Riverside County Multiple Species Habitat Conservation Plan

The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) is a comprehensive, multi-jurisdictional habitat conservation plan focusing on conservation of species and their associated habitats in western Riverside County. The MSHCP identified 146 species, referred to as "Covered Species," for which the federal Endangered Species Act (ESA) and the California ESA "take" authorization has been granted to signatories to the plan as long as they comply with its requirements. Of the 146 Covered Species within the MSHCP, 118 are considered to be "adequately conserved." The remaining 28 Covered Species will be considered to be adequately conserved when certain landmark conservation requirements are met during the course of future development. The goal of the MSHCP is to maintain the biological and ecological diversity within a rapidly urbanizing region while also improving the future economic development in the County by providing an efficient, streamlined regulatory process through which development can proceed in an efficient way.

Section 6.1.2 of the MSHCP addresses riparian and riverine communities, which support several rare and sensitive bird species along with other animal and plant species. This section requires, for impacts to riparian and riverine communities, that a Determination of Biologically Equivalent or Superior Preservation (DBESP) should be prepared in order to satisfy MSHCP requirements.

3.0 METHODS

This aquatic resources delineation was conducted in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Arid West Region Supplement) (USACE 2008a). The boundaries of aquatic resources were delineated through standard field methods (e.g., paired sample set analyses), and the *Web Soil Survey* (NRCS 2019) was used to aid in identifying hydric soils in the field. *The Jepson Manual, 2nd Edition* (Baldwin et al. 2012) was used for plant nomenclature and identification.

A field survey was conducted on June 25, 2019, by ECORP biologist Scott Taylor. Mr. Taylor walked the entire DA, where accessible, to determine the location and extent of aquatic resources within the DA. Paired locations were sampled to evaluate whether or not the vegetation, hydrology, and soils data supported an aquatic resource determination. At each paired location, one point was located such that it was within the estimated aquatic resource area, and the other point was situated outside the limits of the

estimated aquatic resource area. Aquatic resources within the DA were recorded in the field using a post-processing-capable global positioning system unit with sub-meter accuracy (Trimble™ GeoXT).

3.1 Research on Existing Recorded Features

The National Wetlands Inventory (NWI) was consulted for the preparation of this delineation. The NWI is a publicly available national dataset that provides detailed information on the abundance, characteristics, and distribution of U.S. wetlands (USFWS 2019). NWI includes aquatic resource features mapped using a variety of remote sensing and modeling techniques. As such, these aquatic features may or may not exist as represented. In addition, NWI dataset varies in detail, accuracy, and age, and is meant to be used as a tool to assist with an aquatic resources delineation but not to serve as the only source of information. Data contained within the NWI can be historical in nature at times, having been modified by recent development or by other factors.

The USGS National Map-Advanced Viewer (USGS 2020) was also consulted to assist with the identification of water flow patterns and previously recorded features within the DA and its vicinity. This viewer depicts data from the National Hydrology Dataset (NHD), graphically depicting directions of flows, along with watershed boundaries.

3.2 Routine Determinations for Wetland Waters of the U.S.

To be determined a wetland, the following three criteria must be met:

- A majority of dominant vegetation species are wetland-associated species;
- Hydrologic conditions exist that result in periods of flooding, ponding, or saturation during the growing season; and
- Hydric soils are present.

3.2.1 Vegetation

Hydrophytic vegetation is defined as the sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanent or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present (Environmental Laboratory 1987). The definition of wetlands includes the phrase "a prevalence of vegetation typically adapted for life in saturated soil conditions." Prevalent vegetation is characterized by the dominant plant species comprising the plant community (Environmental Laboratory 1987). The dominance test is the basic hydrophytic vegetation indicator and was applied at each sampling point location. The "50/20 rule" was used to select the dominant plant species from each stratum of the community. The rule states that for each stratum in the plant community, dominant species are the most abundant plant species (when ranked in descending order of coverage and cumulatively totaled) that immediately exceed 50 percent of the total coverage for the stratum, plus any additional species that individually comprise 20 percent or more of the total cover in the stratum (USACE 1992, 2008a).

Dominant plant species observed at each sampling point were then classified according to their indicator status (probability of occurrence in wetlands, Table 1), *North American Digital Flora: National Wetland Plant List* (Lichvar et al. 2016). If the majority (more than 50 percent) of the dominant vegetation on a site are classified as obligate (OBL), facultative wetland (FACW), or facultative (FAC), the site was considered to be dominated by hydrophytic vegetation.

Plant Species Classification	Abbreviation	Probability of Occurring in Wetland
Obligate	OBL	Almost always occur in wetlands
Facultative Wetland	FACW	Usually occur in wetlands, but may occur in non-wetlands
Facultative	FAC	Occur in wetlands and non-wetlands
Facultative Upland	FACU	Usually occur in non-wetlands, but may occur in wetlands
Upland	UPL	Almost never occur in wetlands
Plants That Are Not Listed (assumed upland species)	N/L	Does not occur in wetlands in any region

In instances where indicators of hydric soil and wetland hydrology were present but the plant community failed the dominance test, the vegetation was re-evaluated using the Prevalence Index. The Prevalence Index is a weighted-average wetland indicator status of all plant species in the sampling plot, where each indicator status category is given a numeric code (OBL=1, FACW=2, FAC=3, FACU=4, and UPL=5) and weighting is by abundance (percent cover). If the plant community failed the Prevalence Index, the presence/absence of plant morphological adaptations to prolonged inundation or saturation in the root zone was evaluated.

3.2.2 Soils

A hydric soil is defined as 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 (NRCS 2003). Indicators that a hydric soil is present include, but are not limited to, histosols, histic epipedon, hydrogen sulfide, depleted below dark surface, sandy redox, loamy gleyed matrix, depleted matrix, redox dark surface, redox depressions, and vernal pools.

At each sampling point a soil pit was excavated to the depth needed to document an indicator, to confirm the absence of indicators, or until refusal at each sampling point. The soil was then examined for hydric soil indicators. Soil colors were determined while the soil was moist using the *Munsell Soil Color Charts* (Kollmorgen Instruments Co. 1990). Hydric soils are formed predominantly by the accumulation or loss of iron, manganese, sulfur, or carbon compounds in a saturated and anaerobic environment. These processes and the features in the soil that develop can be identified by looking at the color and texture of the soils.

3.2.3 Hydrology

Wetlands, by definition, are seasonally or perennially inundated or saturated at or near (within 12 inches of) the soil surface. Primary indicators of wetland hydrology include, but are not limited to: visual observation of saturated soils, visual observation of inundation, surface soil cracks, inundation visible on aerial imagery, water-stained leaves, oxidized rhizospheres along living roots, aquatic invertebrates, water marks (secondary indicator in riverine environments), drift lines (secondary indicator in riverine environments), and sediment deposits (secondary indicator in riverine environments). The occurrence of one primary indicator is sufficient to conclude that wetland hydrology is present. If no primary indicators are observed, two or more secondary indicators are required to conclude wetland hydrology is present. Secondary indicators include, but are not limited to: drainage patterns, crayfish burrows, FAC-neutral test, and shallow aquitard.

3.3 Ordinary High-Water Mark/Non-Wetland Waters

The discussion in this section briefly summarizes *A Field Guide to the Identification of the Ordinary High-Water Mark (OHWM) in the Arid West Region of the Western United States* (Lichvar and McColley 2008). OHWM indicators commonly found in the Arid West include a clear natural scour line impressed on the bank, recent bank erosion, destruction of native terrestrial vegetation, and the presence of litter and debris. Resources needed to delineate OHWM include aerial photography and other imagery, topographic maps and other maps (e.g., geological, soil, vegetation), rainfall data, stream gage data, and existing delineations (if available). Field identification of the OHWM includes noting general impression of the vegetation species and distribution, geomorphic features present, surrounding upland land use, and hydrologic alterations and in-stream and floodplain structures. In the field, the process of delineating the OHWM includes the identification of a low-flow channel (if present), a transition to an active floodplain and an active floodplain through the presence of geomorphic features (e.g., presence of an active floodplain, benches, break in bank slope, staining of rocks, litter or drift), and vegetation indicators (e.g., presence of sparse/low vegetation, annual herbs, hydro mesic ruderals, pioneer tree seedlings and saplings, xeroriparian species).

3.4 Weather Conditions During Survey

Weather conditions for the survey were ideal, with clear skies, wind from 0 to 1 mile per hour and temperatures ranging from 80° to 91°F.

3.5 Limitations of the Survey

Limitations of the survey included the following:

- Many portions of Bundy Canyon Wash within the DA were largely inaccessible due to being located within private property, including areas fenced by chain-link or barbed-wire fencing.
- A portion of the southernmost DA, south of Baxter Road, was inaccessible due to the presence of a chain-link fence. These areas were visually examined from Baxter Road.

4.0 RESULTS

4.1 Existing Site Conditions

The DA is located within relatively flat terrain situated at an elevational range of approximately 1,250 to 1,500 feet above mean sea level in the South Coast Subregion of the Southwestern floristic region of California (Baldwin et al. 2012). The average winter low temperature in the vicinity of the DA is 51°F, and the average summer high temperature is 77°F. Average annual precipitation is approximately 12.84 inches, which falls as rain (National Oceanic and Atmospheric Administration [NOAA] 2019a).

Much of the DA is considered to be developed and disturbed, but there are natural vegetation communities present, mostly associated with various aquatic resource features (Figure 3. *Wildomar Lateral C Vegetation*). There is an isolated patch of willows in the northernmost parcel, as well as patches of Mule Fat Thickets and Riversidean Alluvial Fan Sage Scrub. A patch of Red Willow Scrub is present along the Baxter Road portion of the two planned lateral alignments. Bundy Canyon Wash contains a mixture of patches of riparian habitats along with a few coast live oaks (*Quercus agrifolia*). The other vegetation within the DA generally consists of nonnative grasslands, ruderal areas, and agricultural areas.

The surrounding area consists of rural-suburban development with sparse commercial development, mostly concentrated around the I-15 corridor. More specifically, development within this portion of the project area includes medium-density single-family residences, a high school, and varied commercial businesses (e.g., a convenience store and restaurant). Bundy Canyon Wash is located adjacent and meanders approximately parallel to the revised Lateral C alignment. Roadways within the DA include Como Street, Baxter Road, Grove Street, and White Street.

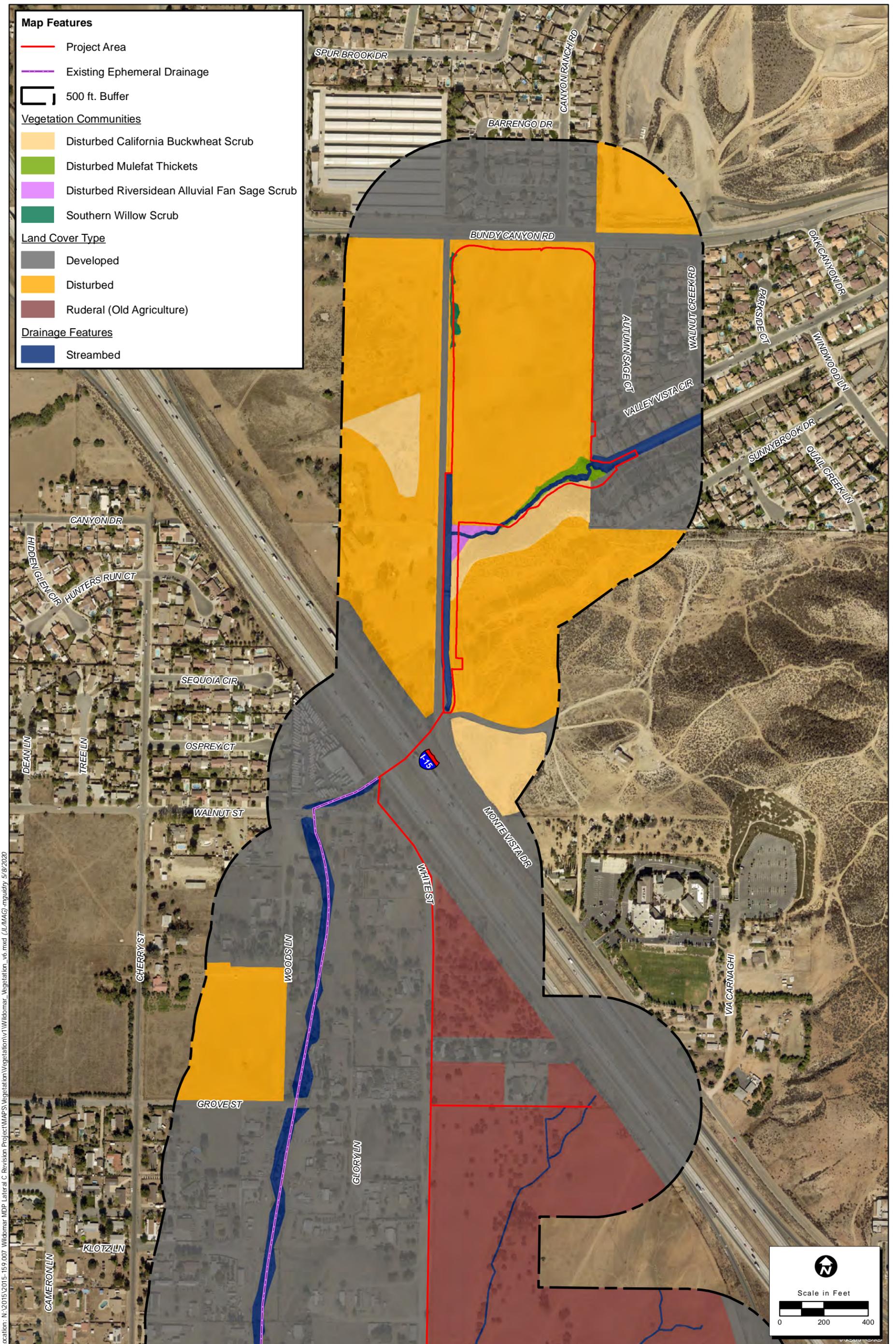
This aquatic resources delineation was conducted in the summer, towards the end of the blooming season for most plant species. The survey was conducted at an acceptable time of the year to observe wetland hydrology and, although few wetland plant species were in bloom at the time of the survey, most plants were identifiable to species based upon vegetative or fruit morphology.

4.1.1 National Wetlands Inventory

According to the NWI, there are aquatic features mapped within the DA (Figure 4. *National Wetland Inventory Features*) as crossing the project area at various locations. The locations of the mapped features correspond well with the findings of this delineation. Features mapped are classified as R4SBA, representing Riverine (R), Intermittent (4), Streambed (SB), and Temporarily Flooded (A).

4.1.2 National Hydrology Dataset

The NHD depicts aquatic features mapped within the DA aligned with Bundy Canyon Wash, in the same locations as shown on the NWI mapping. No additional features are shown on the NHD mapping for the area. The category of the riverine features correspond also with those identified in the NWI mapping – R4SBA.

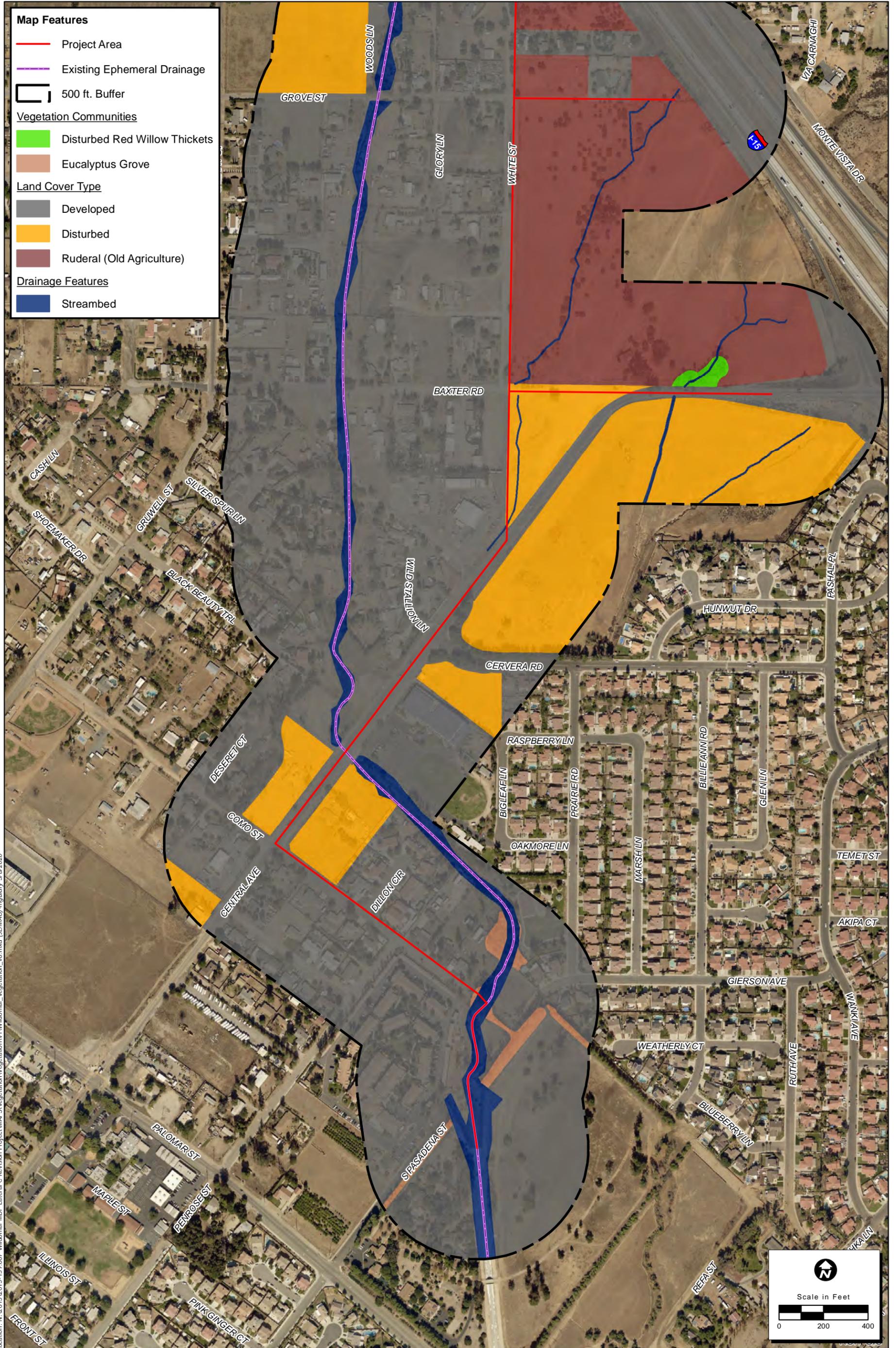


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Map Date: 4/24/2020
Base Source: NAIP 2016

Figure 3. Wildomar Lateral C Vegetation

2015-159.007 Wildomar Lateral C

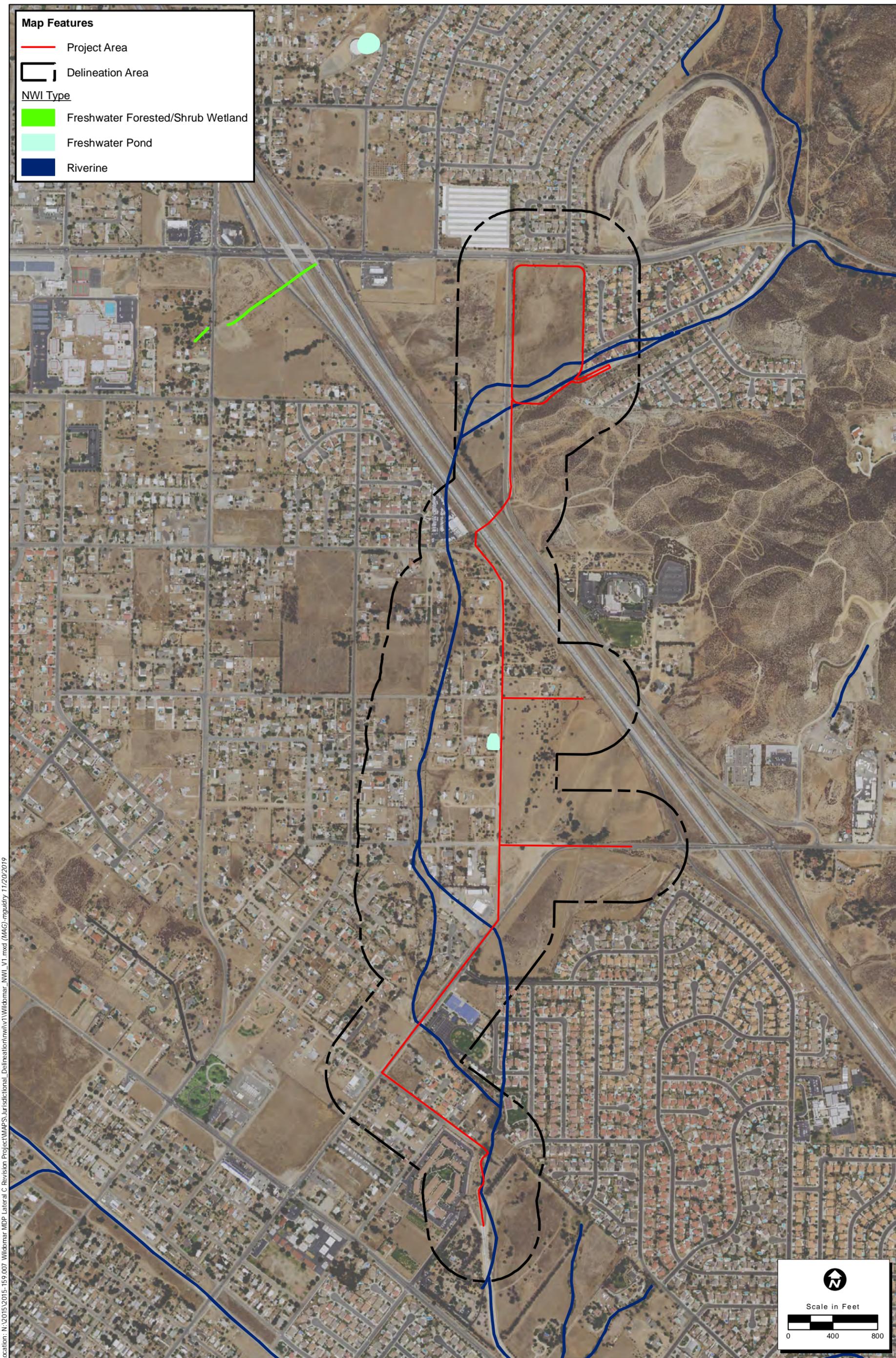


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Map Date: 4/24/2020
Base Source: NAIP 2016

Figure 3. Wildomar Lateral C Vegetation

2015-159.007 Wildomar Lateral C

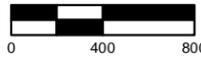


Map Features

- Project Area
- Delineation Area

NWI Type

- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine


 Scale in Feet

 0 400 800

Location: N:\2015\2015-159.007 Wildomar MDP Lateral C Revision Project\MAPS\Jurisdictional_Delineation\NW1\Wildomar_NWI_V1.mxd (MAG)-mguidry 11/20/2019

Map Date: 8/15/2019
Base Source: NAIP 2016

Figure 4. National Wetland Inventory Features

4.2 Soils

According to the Web Soil Survey (NRCS 2019), 23 soil units, or types, have been mapped within the DA (Table 2 and Figure 5. *Natural Resources Conservation Service Soil Types*). The field examination confirmed the soil mapping, where soils were studied in detail, particularly at the two sample points. None of the mapped soil types are considered to be hydric soils except for Riverwash, which is detailed below.

Riverwash (RsC) consists of typically gravelly coarse sand derived from various sources along the associated stream channels. The soil type is excessively drained and frequently flooded and has a very low water storage capacity. These soils tend to be deposited and moved along linear stream courses at a rate that is dependent on the stream size, shape, and other geomorphological elements. Within the DA this soil type was composed of sand and gravel primarily but also contained a few cobbles.

Soil Unit	Hydric?	Hydric Criteria
CaF2-Cajalco fine sandy loam, 15-35 percent slopes	No	None
ChD2-Cieneba sandy loam, 8-15 percent slopes	No	None
ChF2-Cieneba sandy loam, 15 to 50 percent slopes	No	None
CkF2-Cieneba Cieneba rocky sandy loam, 15 to 50 percent slopes	No	None
GyA-Greenfield sandy loam, 0-2 percent slopes	No	None
GyC2-Greenfield sandy loam, 2-8 percent slopes	No	None
GyD2-Greenfield sandy loam, 8-15 percent slopes	No	None
HcC-Hanford coarse sandy loam, 2-8 percent slopes	No	None
HcD2-Hanford coarse sandy loam, 8-15 percent slopes	No	None
HnC-Honcut 2-8 percent slopes	No	None
MmB-Monserate sandy loam, 0-5 percent slopes	No	None
MmC2-Monserate sandy loam, 5-8 percent slopes	No	None
MmD2-Monserate sandy loam, shallow, 8-15 percent slopes	No	None
MnD2-Monserae sandy loam, 5-15 percent slopes	No	None
MnE3-Monserae sandy loam, shallow, 15-25 percent slopes	No	None
PIB-Placentia fine sandy loam, 0-5 percent slopes	No	None
PID-Placentia fine sandy loam, 5-15 percent slopes	No	None
RaB2-Ramona sandy loam 2-5 percent slopes,	No	None
RaD2-Ramona sandy loam, 8-15 percent slopes, eroded	No	None
ReC2-Ramona very fine sandy loam, 0-8 percent slopes	No	None
RsC-Riverwash	Yes	Frequently flooded
TvC-Tujunga loamy sand, channeled, 0-8 percent slopes	No	None
YbE3-Yokoh Yokohl loam, 8-25 percent slopes	No	None

Map Features

— Project Area

▭ Delineation Area

GSSURGO_Clip500ft_20190815 (LEGEND)

Series Number - Series Name

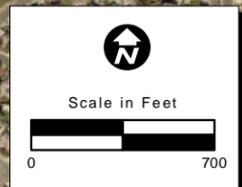
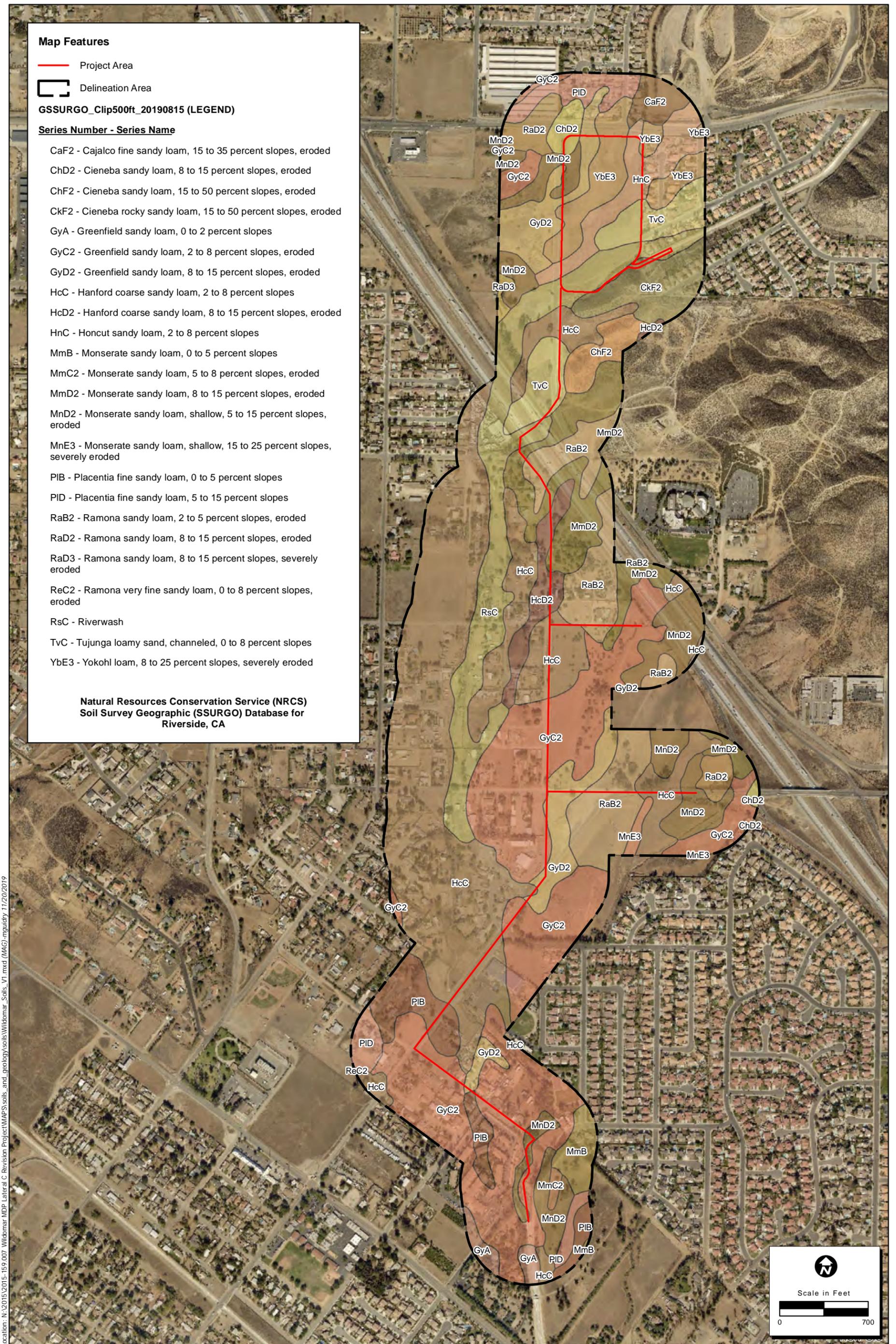
- CaF2 - Cajalco fine sandy loam, 15 to 35 percent slopes, eroded
- ChD2 - Cieneba sandy loam, 8 to 15 percent slopes, eroded
- ChF2 - Cieneba sandy loam, 15 to 50 percent slopes, eroded
- CkF2 - Cieneba rocky sandy loam, 15 to 50 percent slopes, eroded
- GyA - Greenfield sandy loam, 0 to 2 percent slopes
- GyC2 - Greenfield sandy loam, 2 to 8 percent slopes, eroded
- GyD2 - Greenfield sandy loam, 8 to 15 percent slopes, eroded
- HcC - Hanford coarse sandy loam, 2 to 8 percent slopes
- HcD2 - Hanford coarse sandy loam, 8 to 15 percent slopes, eroded
- HnC - Honcut sandy loam, 2 to 8 percent slopes
- MmB - Monserate sandy loam, 0 to 5 percent slopes
- MmC2 - Monserate sandy loam, 5 to 8 percent slopes, eroded
- MmD2 - Monserate sandy loam, 8 to 15 percent slopes, eroded
- MnD2 - Monserate sandy loam, shallow, 5 to 15 percent slopes, eroded
- MnE3 - Monserate sandy loam, shallow, 15 to 25 percent slopes, severely eroded
- PIB - Placentia fine sandy loam, 0 to 5 percent slopes
- PID - Placentia fine sandy loam, 5 to 15 percent slopes
- RaB2 - Ramona sandy loam, 2 to 5 percent slopes, eroded
- RaD2 - Ramona sandy loam, 8 to 15 percent slopes, eroded
- RaD3 - Ramona sandy loam, 8 to 15 percent slopes, severely eroded
- ReC2 - Ramona very fine sandy loam, 0 to 8 percent slopes, eroded
- RsC - Riverwash
- TvC - Tujunga loamy sand, channeled, 0 to 8 percent slopes
- YbE3 - Yokohl loam, 8 to 25 percent slopes, severely eroded

**Natural Resources Conservation Service (NRCS)
Soil Survey Geographic (SSURGO) Database for
Riverside, CA**

Location: N:\2015\2015-159.007 Wildomar MDP Lateral C Revision Project\MAPS\soils_and_geology\soils\Wildomar_Soils_V1.mxd (MAG)-mguidry 11/20/2019

Map Date: 8/15/2019
Base Source: NAIP 2016

Figure 5. Natural Resource Conservation Service Soil Types



4.3 Potential Waters of the U.S.

A total of 4.54 acres (14,297 linear feet) of potential Waters of the U.S./State have been mapped within the DA (Figure 6. USACE *Aquatic Resources Delineation* and Table 3). By far the largest acreage of jurisdictional area within the DA (3.17 acres) is accounted for by Bundy Canyon Wash. The remaining jurisdictional areas are all smaller features of less than 0.5 acre in size.

The Arid West Wetland Determination Data Forms (Version 2.0) are included in Attachment A, a list of plant species observed on-site is included in Attachment B, and photo-documentation of representative aquatic resources is included in Attachment C.

Classification	Acreage ¹	Linear Feet
Wetlands:		
None	-	-
Other Waters (Non-wetland Waters):		
Bundy Canyon Wash (ED-02, ED-03, ED-04, and ED-10)	3.17	7,260
ED-01	1.14	2,431
ED-05	0.05	1,930
ED-06	0.02	741
ED-07	0.03	810
ED-08	0.07	510
ED-09	0.06	615
Total:	4.54	14,297

¹Acreages in this table represent a calculated estimation and are subject to modification following USACE's verification process. Waters areas are measured in State Plane (NAD83) coordinates. All measurements are in the defined units for this coordinate system (feet) and all calculations and summations are calculated in square feet. Results are converted to acreages for ease of use. However, this conversion may lead to minor rounding errors in the reporting of acreage summaries.

4.3.1 Wetlands

No wetlands were identified within the DA. A swale within the area just east of Monte Vista Road was sampled for the presence of wetland vegetation, soils, and hydrologic indicators, but these factors were found to be absent. Another sample point was taken near ED-07 (see Figure 6, Sheet 2), due to the presence of riparian vegetation, but this area was found to also not support wetland indicators. No other potential wetlands were identified within the DA.

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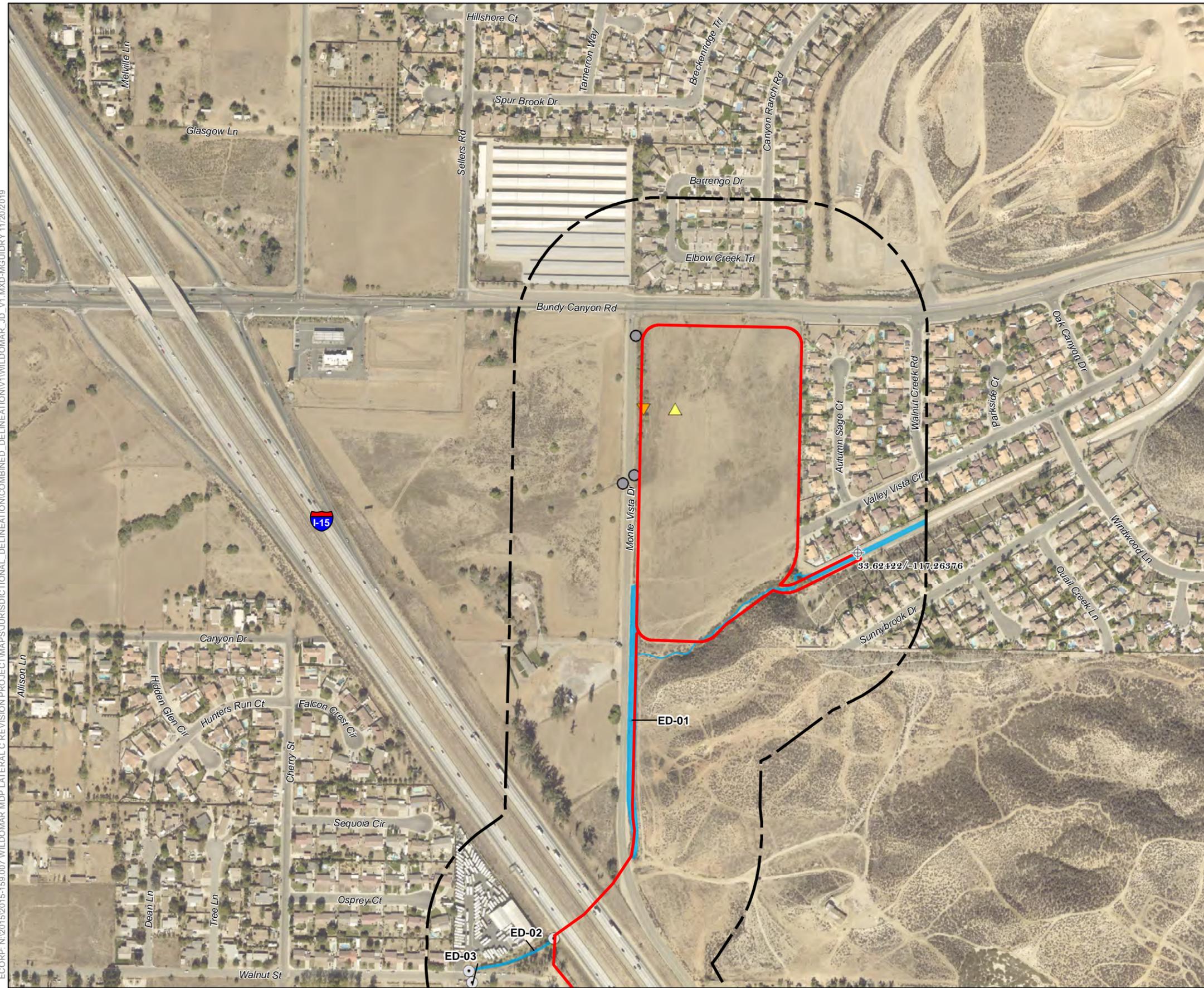
Figure 6. USACE Aquatic Resources Delineation Sheet 1 of 3

Map Features

-  Project Area
-  Delineation Area
-  Waters Point
-  Upland Point
-  Culvert
-  Corrugated Steel Pipe
-  Reference Coordinate (NAD83)

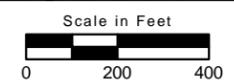
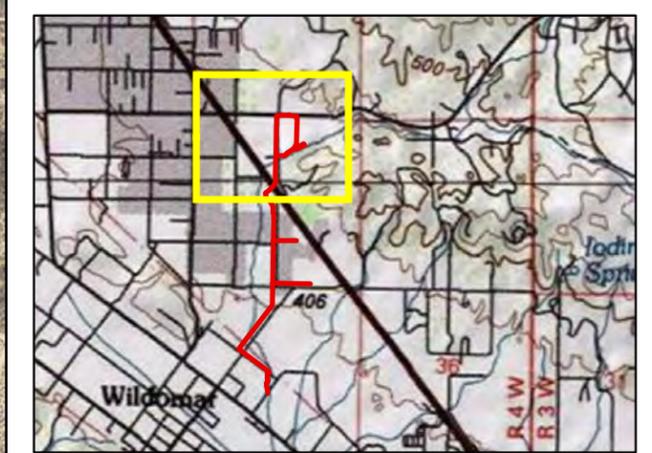
Waters of the U.S. (4.54 ac.)

-  Ephemeral Drainage (4.54 ac.)



¹ Subject to U.S. Army Corps of Engineers verification. This exhibit depicts information and data produced in accord with the wetland delineation methods described in the 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual, Arid West Region, Version 2.0, as well as the Adopted Map and Drawing Standards for the South Pacific Division Regulatory District as amended on February 10, 2016, and conforms to Los Angeles District specifications. However, feature boundaries have not been legally surveyed and may be subject to minor adjustments if more accurate locations are required.
* The acreage value for each feature has been rounded to the nearest 1/100 decimal. Summation of these values may not equal the total potential Waters of the U.S. acreage reported.

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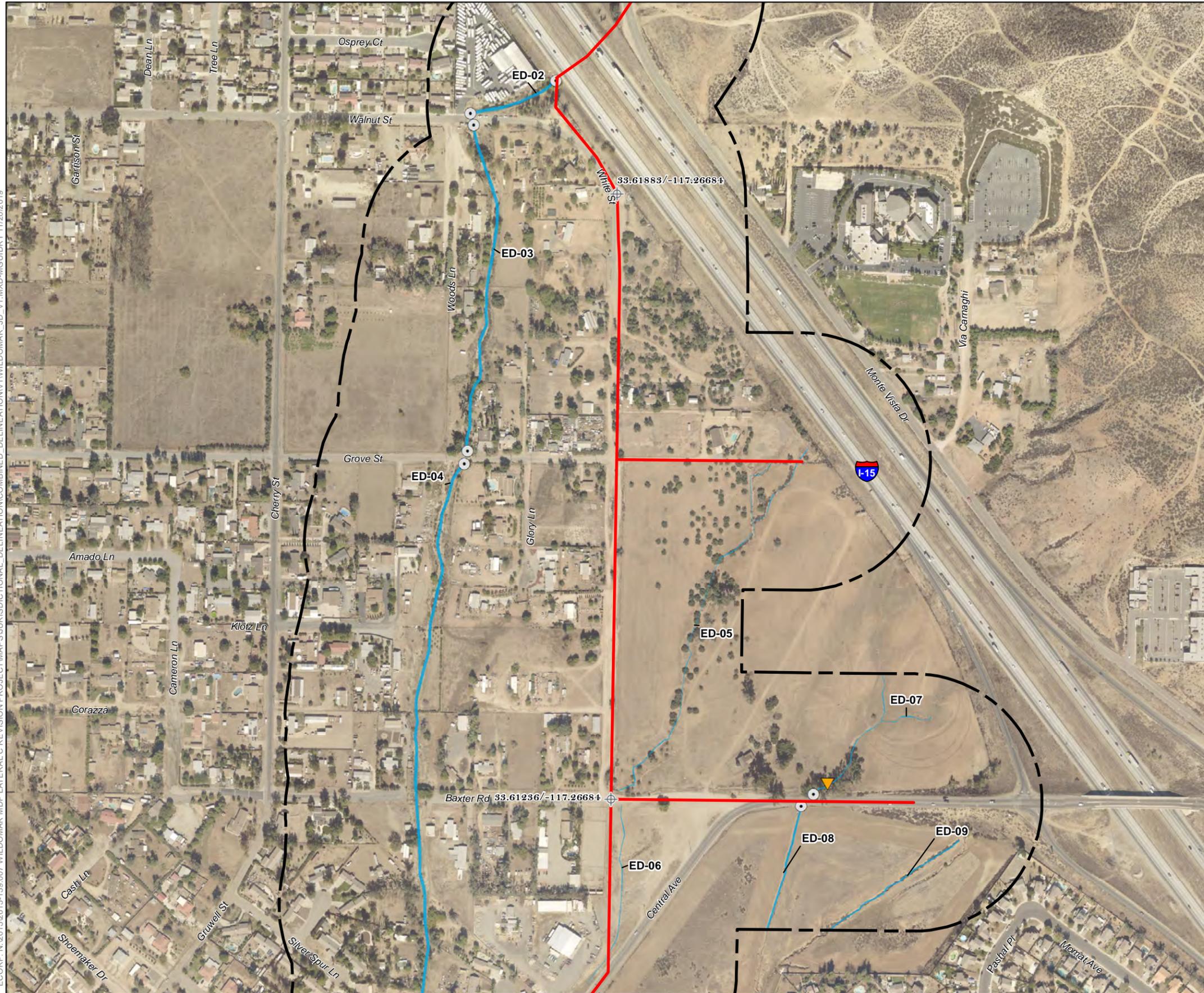


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Figure 6. USACE Aquatic Resources Delineation Sheet 2 of 3

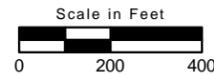
Map Features

-  Project Area
 -  Delineation Area
 -  Waters Point
 -  Culvert
 -  Reference Coordinate (NAD83)
- Waters of the U.S. (4.54 ac.)
-  Ephemeral Drainage (4.54 ac.)



¹ Subject to U.S. Army Corps of Engineers verification. This exhibit depicts information and data produced in accord with the wetland delineation methods described in the 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual, Arid West Region, Version 2.0, as well as the Updated Map and Drawing Standards for the South Pacific Division Regulatory Program as amended on February 10, 2016, and conforms to Los Angeles District specifications. However, feature boundaries have not been legally surveyed and may be subject to minor adjustments if more accurate locations are required.
 * The acreage value for each feature has been rounded to the nearest 1/100 decimal. Summation of these values may not equal the total potential Waters of the U.S. acreage reported.

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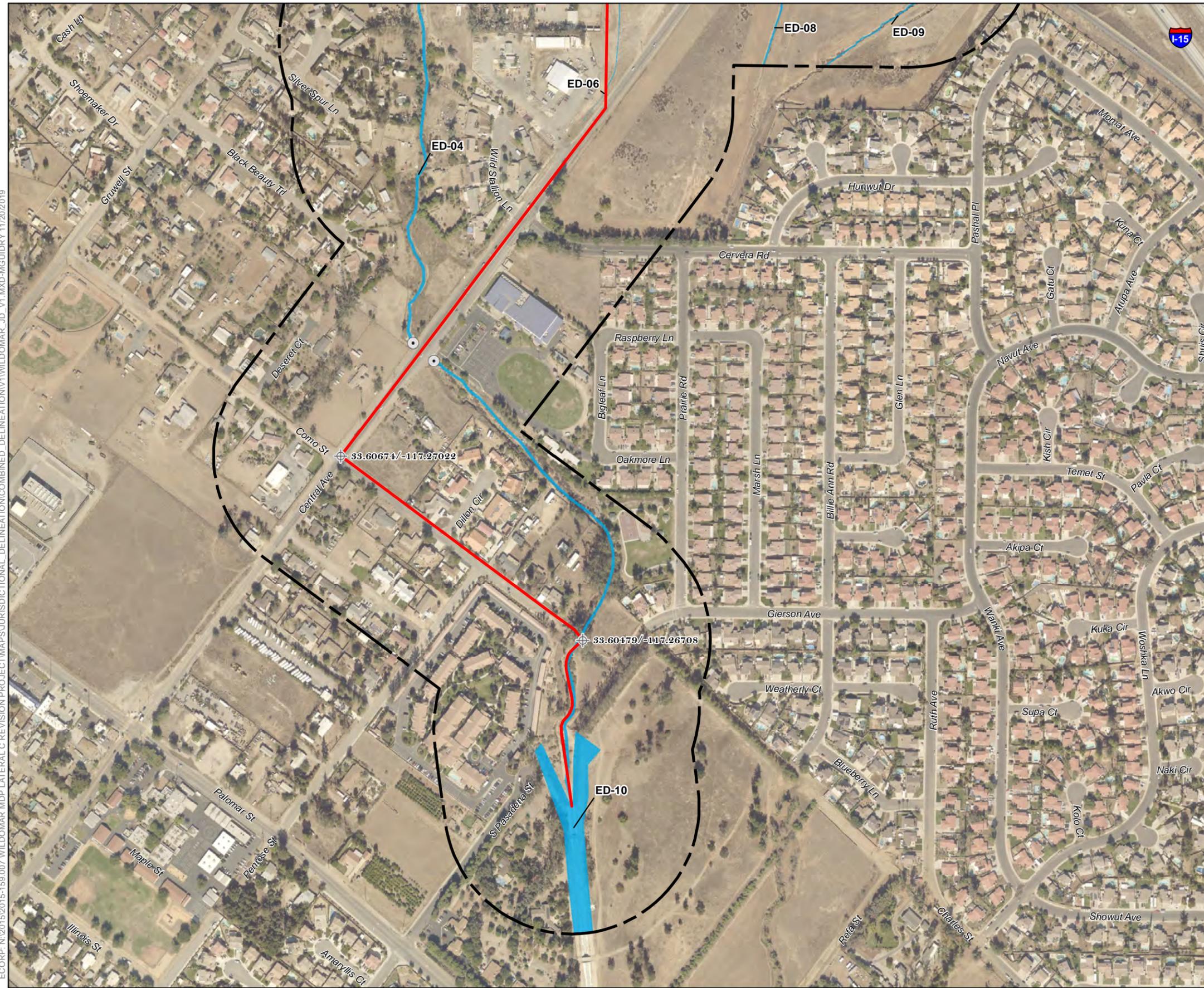


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**Figure 6. USACE
Aquatic Resources Delineation
Sheet 3 of 3**

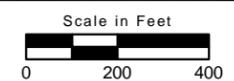
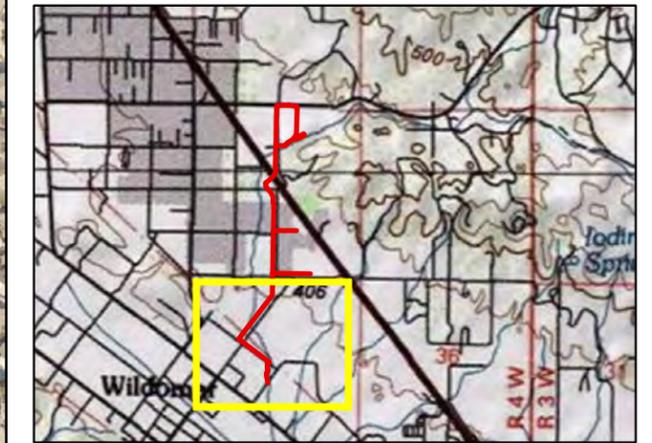
Map Features

-  Project Area
 -  Delineation Area
 -  Culvert
 -  Reference Coordinate (NAD83)
- Waters of the U.S. (4.54 ac.)**
-  Ephemeral Drainage (4.54 ac.)



¹ Subject to U.S. Army Corps of Engineers verification. This exhibit depicts information and data produced in accord with the wetland delineation methods described in the 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual, Arid West Region, Version 2.0, as well as the Updated Map and Drawing Standards for the South Pacific Division Regulatory District as amended on February 10, 2016, and conforms to Los Angeles District specifications. However, feature boundaries have not been legally surveyed and may be subject to minor adjustments if more accurate locations are required.
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4.3.2 Other Waters (Non-wetland Waters)

Ephemeral Drainage

Ephemeral drainages are linear features that exhibit a bed and bank and an OHWM. Ephemeral drainages result from surface flows for short periods during and immediately following significant rainfall events. Ephemeral drainage flows are made up entirely of surface runoff and are not influenced by groundwater. There were six total ephemeral drainages identified within the DA, including Bundy Canyon Wash. Most of the features mapped were less than one foot in width, being small ephemeral drainages that host stormwater flows from relatively small drainage areas.

The ephemeral drainages within the DA were unvegetated, with shrubs or weedy vegetation along the banks. Shrub species recorded adjacent to the DA included Goodding's black willow (*Salix gooddingii*), red willow (*Salix laevigata*), mule fat (*Baccharis salicifolia*), tamarisk (*Tamarix* sp.), and California buckwheat (*Eriogonum fasciculatum*). There was also one tree species observed along the banks of Bundy Canyon Wash, a Fremont cottonwood (*Populus fremontii*). Of these plant species, the two willows, tamarisk, cottonwood, and mule fat are considered to be hydrophytic plant species. Weedy upland plants recorded within the DA adjacent to the ephemeral drainages include species such as wild oats (*Avena* sp.), black mustard (*Brassica nigra*), brome (*Bromus* sp.) and Russian thistle (*Salsola tragus*). None of these plants are hydrophytic. The soils found within the ephemeral drainages were largely composed of sediment deposited from upstream sources within the surrounding hills. A typical soil matrix color within the drainages was 10YR5/3, which is not considered to be a hydric color type.

Indicators of the presence of an OHWM within the ephemeral drainages included presence of bed and bank, drift and/or debris, changes in average sediment texture, changes in vegetation cover, and changes in vegetation species. Indicators of hydrology that were observed within the ephemeral drainages included water marks, debris lines, sediment deposits, drift or debris deposits, and drainage patterns.

The specific drainages occurring within the DA are described fully below.

Bundy Canyon Wash

Bundy Canyon Wash is the only named ephemeral drainage feature within the DA; whose natural alignment is located below I-15. A concrete channel drains Monte Vista Drive, joins a lateral ephemeral feature (collectively, ED-01) then traverses I-15 through a culvert to enter an earthen channel that runs southward between houses in a rural residential area. On Figures 6, 7, and 8, this alignment is represented by ED-01, ED-02, ED-03, ED-04, and ED-10. Bundy Canyon Wash, which partially coincides with existing Lateral C, varies in width from five to 10 feet.

Bundy Canyon Wash within the DA primarily contains a mixture of disturbed habitat and unvegetated streambed. Various riparian habitats are present, as well as scattered oak trees (ED-02, ED-03, and ED-04). The vegetation within Bundy Canyon Wash was largely within private property, and vegetation mapping was not conducted in great detail for these sections.

ED-01

This feature comprises a concrete channel that drains Monte Vista Drive along with an earthen drainageway that collects runoff from upstream of the proposed basin area and conveys it towards the concrete channel.

ED-05

This feature occurs east of White Street and between Baxter Road and Grove Street. The channel is unvegetated and lined primarily with non-native grasses and scattered olive trees (*Olea europaea*). There was a single coast live oak located along its path approximately 100 feet north of Baxter Road, but outside of the channel. The channel was approximately one foot in width, and contained hydrologic indicators (presence of bed and bank). At its southern end, the channel runs across Baxter Road in sheet flows.

ED-06

This feature was a continuation of ED-05, to the south of Baxter Road. It was less than one foot wide and unvegetated, with non-native vegetation along its banks. The feature becomes less distinct towards its southern end near Central Avenue.

ED-07

This feature is located north of Baxter Road and east of ED-05, and occurs as a narrow, less than one foot wide, channel that collects stormwater flows in a grassy field and directs them southwards towards Baxter Road. There were hydrologic indicators present (bed and bank) and vegetation surrounding the channel consisted primarily of non-native grasses. At Baxter Road a culvert directs flows underneath the road. Water backup behind this culvert has led to the growth of a small grove of Red Willow Thickets. This area was sampled to determine if wetlands were present, but no wetlands were found to be present.

ED-08

This is a continuation of ED-07 on the south side of Baxter Road. Due to the presence of a chain-link fence the area was not physically walked. The feature consisted of a defined, unvegetated channel with bed and bank morphology and vegetation along the sides consisting of non-native grasses.

ED-09

This feature occurs south of Baxter Road to the east of ED-08 and was mapped using aerial photography. Its channel was not directly observed due to the presence of a chain-link fence preventing access to this parcel. The channel appears to support bed and bank morphology and, based on the vegetation on the parcel, is likely surrounded by non-native grasses.

4.4 California Department of Fish and Wildlife Jurisdiction

A total of 16.56 acres (14,297 linear feet) of potential CDFW jurisdiction have been mapped within the DA, including primarily streambed features (Figure 7. *CDFW Jurisdiction-Streambeds* and Table 4). CDFW jurisdiction encompasses all Waters of the U.S. mapped within the DA, in addition to some additional streambed areas along with riparian habitats mapped within the DA. Riparian habitats included Mulefat Thickets and Riversidean Alluvial Fan Sage Scrub mapped along ED-01 and disturbed Red Willow Thickets mapped along ED-07. Descriptions of the CDFW jurisdiction within the DA can be found below.

Type	Acreage
Streambed	15.37
Mule Fat Thickets	0.45
Disturbed Red Willow Thickets	0.42
Riversidean Alluvial Fan Sage Scrub	0.32
Total	16.56

Bundy Canyon Wash

Bundy Canyon Wash contains primarily a mixture of disturbed habitat and unvegetated streambed. Various riparian habitats are present as well as scattered oak trees. The vegetation within the portions of Bundy Canyon Wash were largely within private property and vegetation mapping was not conducted in great detail for these sections.

ED-01

This feature comprises a concrete channel that drains Monte Vista Drive along with an earthen drainageway that collects runoff from upstream of the proposed basin area and conveys it towards the concrete channel.

ED-05

This feature is an unvegetated channel that occurs east of White Street and between Baxter Road and Grove Street. The channel is unvegetated and lined primarily with non-native grasses and scattered olive trees (*Olea europaea*). There was a single coast live oak located along its path approximately 100 feet north of Baxter Road, but outside of the channel.

ED-06

This feature was an unvegetated channel that continued ED-05 to the south of Baxter Road.

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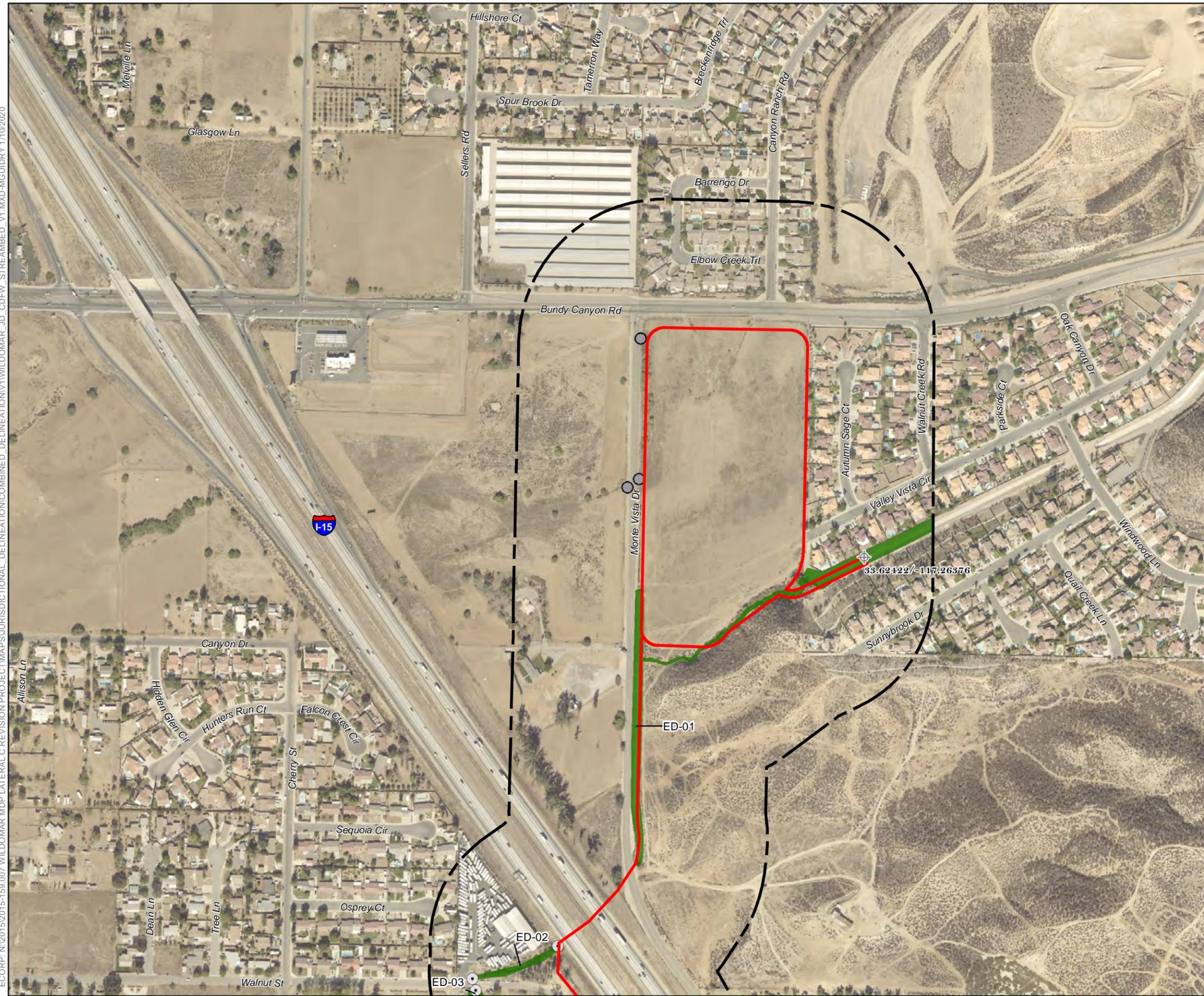
Figure 7.
CDFW Jurisdiction (Streambeds)
Sheet 1 of 3

Map Features

-  Project Area
-  Delineation Area
-  Culvert
-  Corrugated Steel Pipe
-  Reference Coordinate (NAD83)

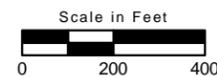
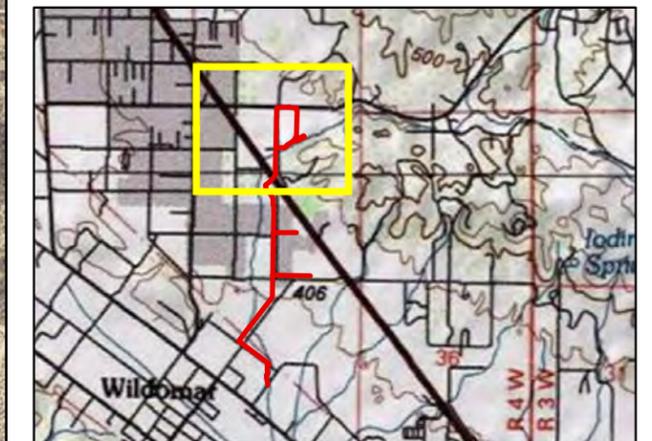
CDFW Jurisdiction

-  Streambed (10.84 ac.)



¹ Subject to U.S. Army Corps of Engineers verification. This exhibit depicts information and data produced in accord with the wetland delineation methods described in the 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual, Arid West Region, Version 2.0, as well as the Updated Map and Drawing Standards for the South Pacific Division Regulatory Program as amended on February 10, 2016, and conforms to Los Angeles District specifications. However, feature boundaries have not been legally surveyed and may be subject to minor adjustments if more accurate locations are required.
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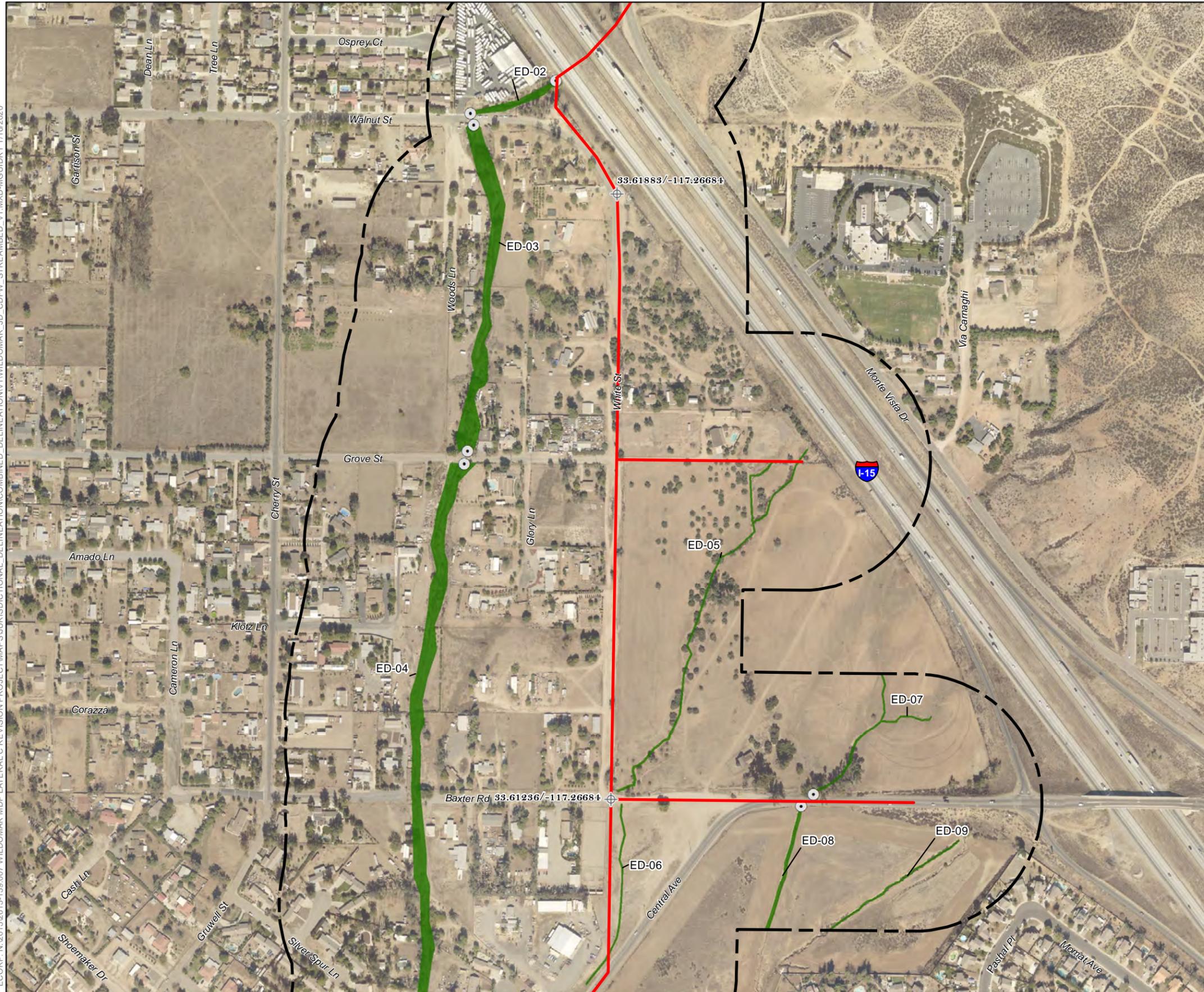
Figure 7. CDFW Jurisdiction (Streambeds) Sheet 2 of 3

Map Features

- Project Area
- Delineation Area
- Culvert
- Reference Coordinate (NAD83)

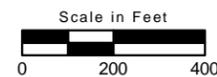
CDFW Jurisdiction

- Streambed (10.84 ac.)



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 * The acreage value for each feature has been rounded to the nearest 1/100 decimal. Summation of these values may not equal the total potential Waters of the U.S. acreage reported.

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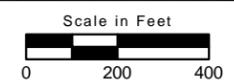
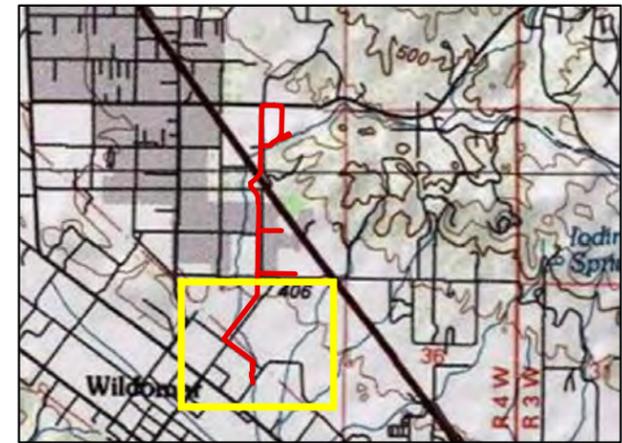


Figure 7.
CDFW Jurisdiction (Streambeds)
Sheet 3 of 3

- Map Features**
- Project Area
 - Delineation Area
 - Culvert
 - Reference Coordinate (NAD83)
- CDFW Jurisdiction**
- Streambed (10.84 ac.)

¹ Subject to U.S. Army Corps of Engineers verification. This exhibit depicts information and data produced in accord with the wetland delineation methods described in the 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual, And West Region Version 2.0, as well as the Updated Map and Drawing Standards for the South Pacific Division Regulatory District as amended on February 10, 2016, and conforms to Los Angeles District specifications. However, feature boundaries have not been legally surveyed and may be subject to minor adjustments if more accurate locations are required.
² The acreage value for each feature has been rounded to the nearest 1/100 decimal. Summation of these values may not equal the total potential Waters of the U.S. acreage reported.

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ED-07

This feature is an unvegetated channel located north of Baxter Road and east of ED-05, and occurs as a narrow, less than one foot wide, channel that collects stormwater flows in a grassy field and directs them southwards towards Baxter Road. A small patch of Red Willow Thickets was mapped along the southern end of this feature.

ED-08

This is an unvegetated channel that is a continuation of ED-07 on the south side of Baxter Road.

ED-09

This feature occurs south of Baxter Road to the east of ED-08, and was mapped using aerial photography. Its channel was not observed due to the presence of a chain-link fence preventing access to this parcel. The channel appears to be unvegetated.

4.4.1 Riparian Habitats

Riparian areas often occur within seasonally inundated floodplains and are seasonally inundated by flood waters. Two areas of riparian habitat are located in the northernmost parcel – Southern Willow Scrub and Mulefat Thickets (Figure 8. *CDFW Jurisdiction-Vegetation*).

A small patch of Southern Willow Scrub is located along the eastern edge of Monte Vista Drive that was considered non-jurisdictional to the CDFW (see Figure 3. *Wildomar Lateral C Vegetation*). This area was found to occur within an isolated topographic feature with water runoff which originates from nearby residential developments and does not connect to downstream waters but to a city storm drain system. Because this area is not associated with a streambed it is considered to be isolated, and it has been considered to be an artificial drainage channel unlikely to be associated with an historic stream. For this reason the area is considered to be potentially non-jurisdictional to the CDFW under Section 1600 of the California Fish and Game Code.

Mulefat Thickets occur along the south side of this undeveloped parcel (ED-01). One Fremont's cottonwood is located near the eastern end of the wash and is included in the Mule Fat Thicket mapping category. There is also a patch of Riversidean Alluvial Fan Sage Scrub associated with ED-01, which is considered to be a CDFW habitat due to its unique association with streambed habitat. Along Baxter Road within the DA, there is a patch of disturbed Red Willow Thickets which is dominated by red willow and is interspersed with gum trees (*Eucalyptus* sp.). This habitat is associated with ED-07, where stormwater flows back up just north of Baxter Road. These habitats are considered to be subject to CDFW jurisdiction pursuant to the California Fish and Game Code as riparian habitats associated with streambeds and are also protected under the MSHCP, requiring a DBESP report.

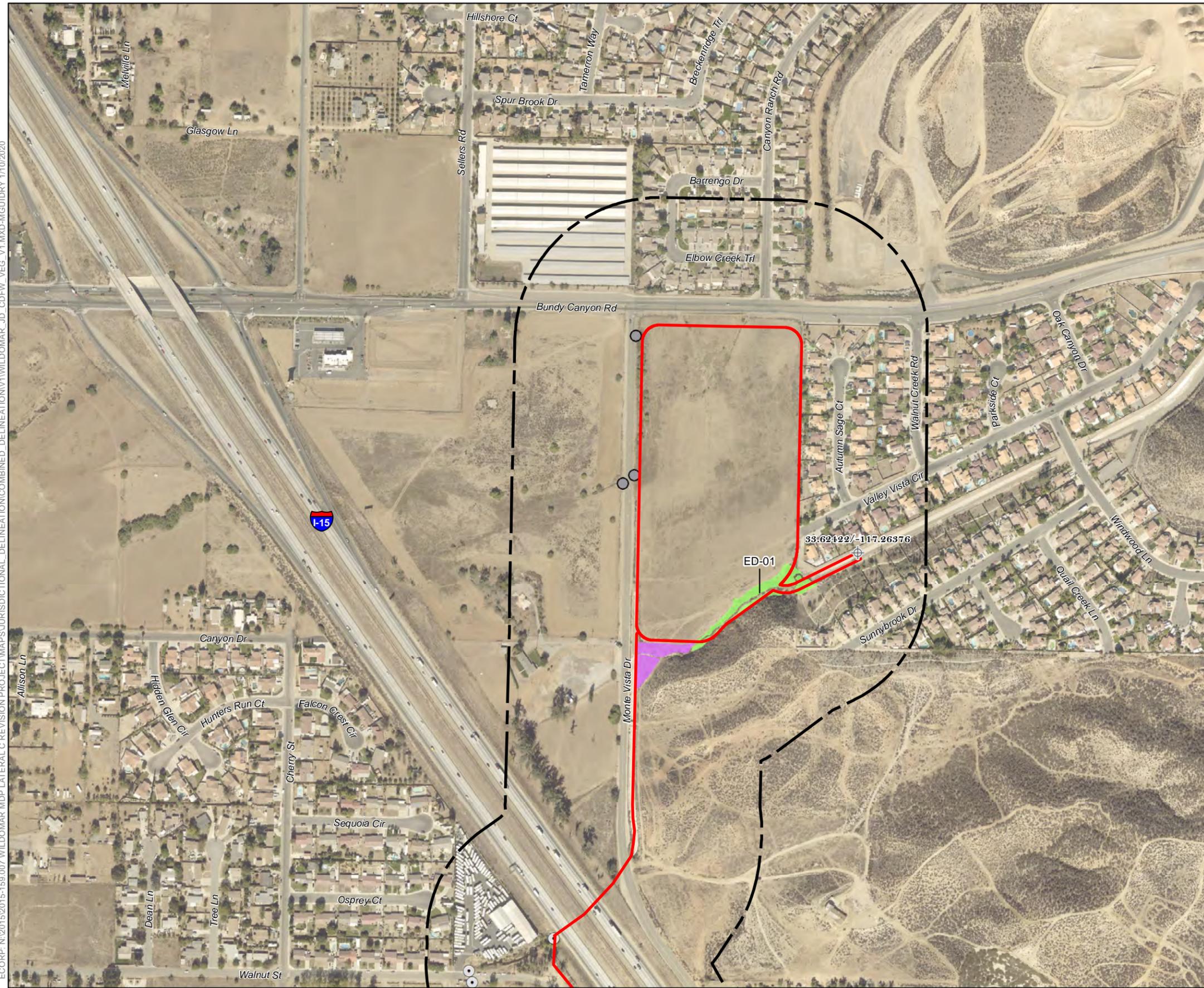
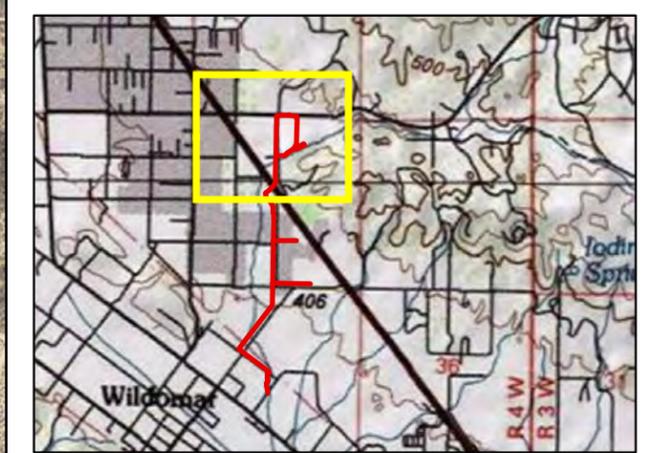


Figure 8.
CDFW Jurisdiction (Vegetation)
Sheet 1 of 3

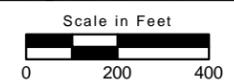
- Map Features**
- Project Area
 - Delineation Area
 - Culvert
 - Corrugated Steel Pipe
 - Reference Coordinate (NAD83)
- CDFW Jurisdiction**
- Mulefat Thickets (0.45 ac.)
 - Riversidean Alluvial Fan Sage Scrub (0.32 ac.)

¹ Subject to U.S. Army Corps of Engineers verification. This exhibit depicts information and data produced in accord with the wetland delineation methods described in the 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual, Arid West Region, Version 2.0, as well as the Updated Map and Drawing Standards for the South Pacific Division Regulatory District as amended on February 10, 2016, and conforms to Los Angeles District specifications. However, feature boundaries have not been legally surveyed and may be subject to minor adjustments if more accurate locations are required.
^{*} The acreage value for each feature has been rounded to the nearest 1/100 decimal. Summation of these values may not equal the total potential Waters of the U.S. acreage reported.

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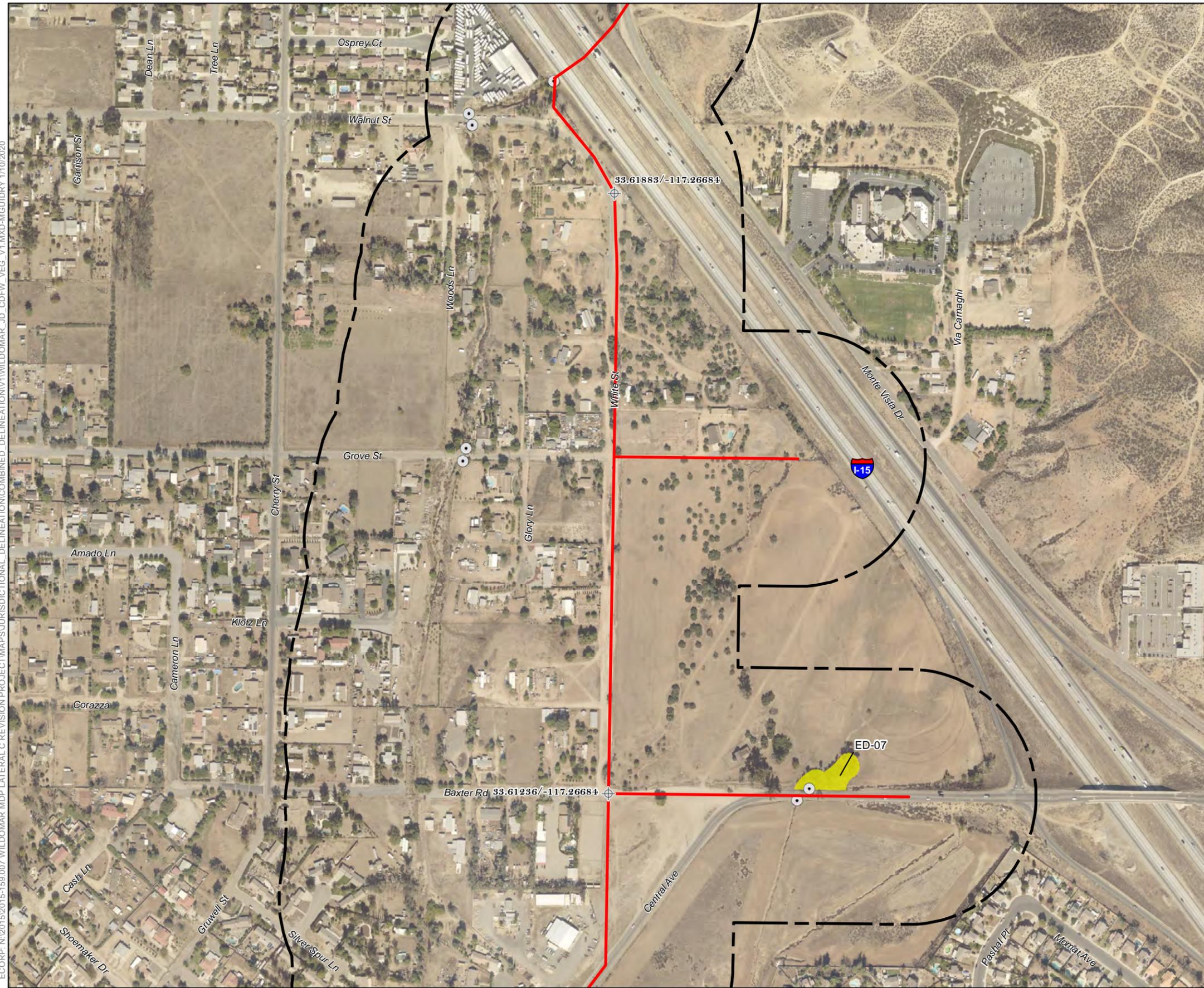
ECORP: N:\2015\2015-159.007 WILDOMAR MDP LATERAL C REVISION PROJECT\MAPS\JURISDICTIONAL_DELINEATION\COMBINED_DELINEATION\WILDOMAR_JD_CDFW_VEG_V1.MXD-MGJUDRY 1/10/2020



ECORP: N:\2015\2015-159.007 WILDOMAR MDP LATERAL C REVISION PROJECT\MAPS\JURISDICTIONAL_DELINEATION\COMBINED_DELINEATION\WILDOMAR_JD_CDFW_VEG_V1.MXD-MGJUDRY 1/10/2020

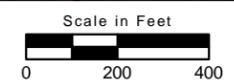
Figure 8. CDFW Jurisdiction (Vegetation) Sheet 2 of 3

- Map Features**
- Project Area
 - Delineation Area
 - Culvert
 - Reference Coordinate (NAD83)
- CDFW Jurisdiction**
- Disturbed Red Willow Thickets (0.42 ac.)



¹ Subject to U.S. Army Corps of Engineers verification. This exhibit depicts information and data produced in accord with the wetland delineation methods described in the 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual, Arid West Region, Version 2.0, as well as the Updated Map and Drawing Standards for the South Pacific Division Regulatory Program as amended on February 10, 2016, and conforms to Los Angeles District specifications. However, feature boundaries have not been legally surveyed and may be subject to minor adjustments if more accurate locations are required.
 * The acreage value for each feature has been rounded to the nearest 1/100 decimal. Summation of these values may not equal the total potential Waters of the U.S. acreage reported.

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 RCIT-GIS



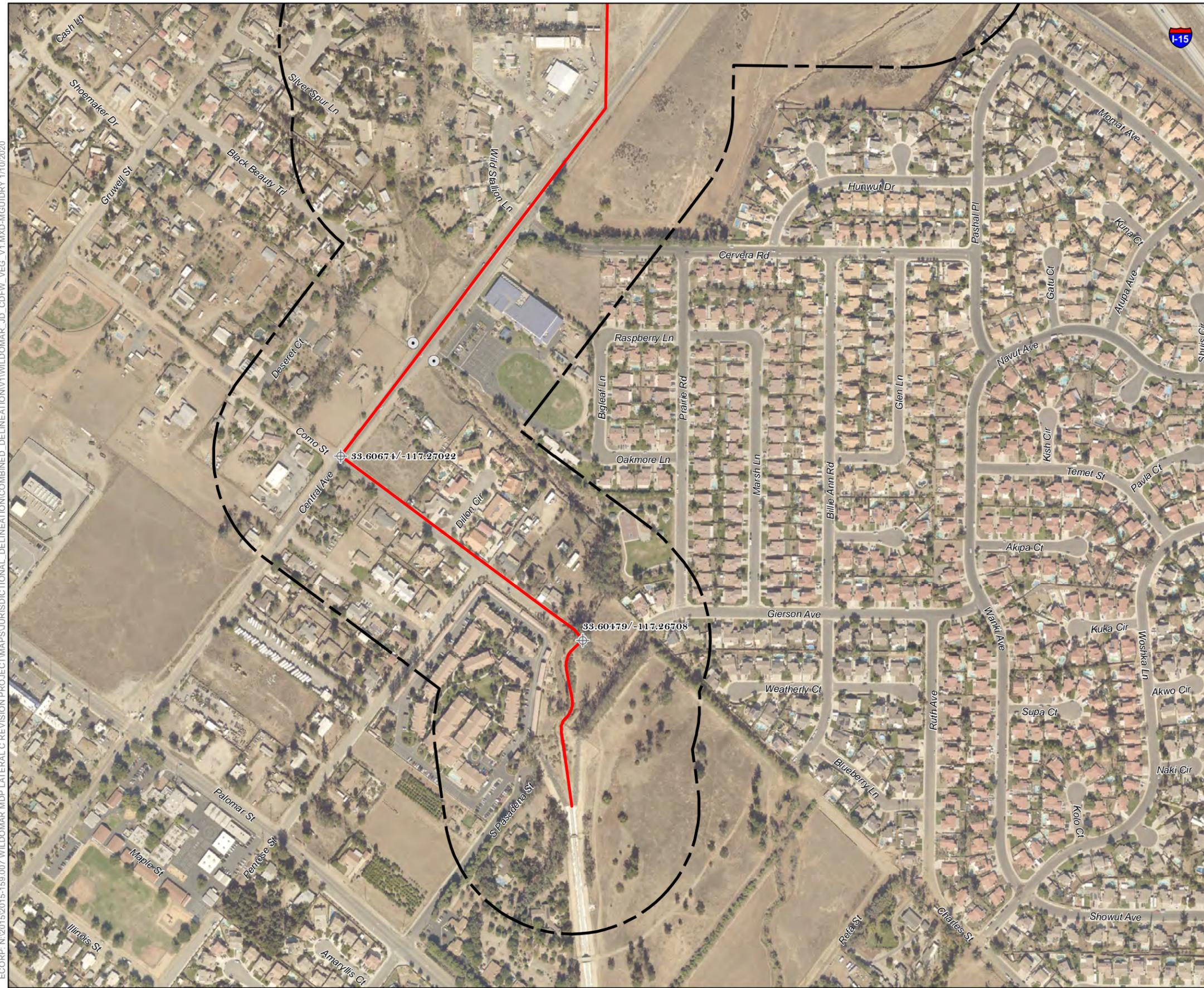


Figure 8.
CDFW Jurisdiction (Vegetation)
Sheet 3 of 3

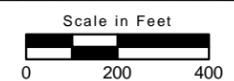
- Map Features**
- Project Area
 - Delineation Area
 - Culvert
 - Reference Coordinate (NAD83)

¹ Subject to U.S. Army Corps of Engineers verification. This exhibit depicts information and data produced in accord with the wetland delineation methods described in the 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual, And West Region Version 2.0 as well as the Updated Map and Drawing Standards for the South Pacific Division Regulatory District as amended on February 10, 2016, and conforms to Los Angeles District specifications. However, feature boundaries have not been legally surveyed and may be subject to minor adjustments if more accurate locations are required.
^{*} The acreage value for each feature has been rounded to the nearest 1/100 decimal. Summation of these values may not equal the total potential Waters of the U.S. acreage reported.

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ECORP: N:\2015\2015-159.007 WILDOMAR MDP LATERAL C REVISION PROJECT\MAPS\JURISDICTIONAL_DELINEATION\COMBINED_DELINEATION\WILDOMAR_JD_CDFW_VEG_V1.MXD-MGJUDRY 1/10/2020



5.0 JURISDICTIONAL ASSESSMENT

A total of 4.54 acres of Waters of the U.S. have been mapped within the DA, consisting entirely of ephemeral drainages. These drainages are considered to be a part of the Bundy Canyon Wash tributary system and connect to Murrieta Creek downstream. Murrieta Creek flows southwards to the Santa Margarita River where it flows ultimately into the Pacific Ocean, which is considered to be an interstate water. Under the CWR, the Waters of the U.S. within the DA connect to interstate waters and are considered to be subject to USACE jurisdiction pursuant to Section 404 of the CWA and SWRCB jurisdiction pursuant to Section 401 of the CWA.

A total of 16.56 acres of CDFW jurisdiction have been mapped within the DA. The mapped features in areas jurisdictional to the CDFW include streambeds and associated riparian habitats including Red Willow Thickets, Riversidean Alluvial Fan Sage Scrub, and Mule Fat Thicket.

These acreages represent a calculated estimation of the extent of aquatic resources within the DA, and are subject to modification following USACE and CDFW review and/or the verification processes. The placement of dredged or fill material into jurisdictional features would require a permit pursuant to Section 404 of the CWA and certification or waiver in compliance with Section 401 of the CWA. Impacts to CDFW jurisdiction would require notification pursuant to the Section 1600 Lake or Streambed Alteration Program.

According to Regulatory Guidance Letter (08-02), an Applicant “may elect to use a preliminary [Jurisdictional Determination] JD to voluntarily waive or set aside questions regarding CWA/Rivers and Harbors Act of 1899 (RHA) jurisdiction over a particular site, usually in the interest of allowing the landowner or other “affected party” to move ahead expeditiously to obtain a USACE permit authorization where the party determines that it is in his or her best interest to do so” (USACE 2008b). A significant nexus evaluation is not necessary to obtain a preliminary JD. An approved JD by the USACE would be necessary to determine if jurisdictional Waters of the U.S. are absent.

6.0 IMPACT ANALYSIS

The following section summarizes the results of the biological surveys and analyzes the Project’s potential impacts in light of the California Environmental Quality Act (CEQA) Initial Study Checklist and the MSHCP. The Project will be constructed in two phases: the first will involve excavation of material from the proposed Bundy Canyon Basin and construction of an outlet structure, and the second phase will involve trenching, Project construction, and paving along the Lateral C mainline, Lateral C-2, and Lateral C-3.

Both direct and indirect impacts are discussed. An impact is considered to be direct when the primary effects of project construction displace or replace habitat areas. Direct impact areas include all areas that will be paved or graded. Indirect impacts occur from secondary effects of a project. Examples include urban edge effects, increased noise, and changes in hydrology.

6.1 Phase 1 (Proposed Bundy Canyon Basin and Outlet Structure)

6.1.1 Direct Impacts

Phase 1 of the Project would involve excavation of the proposed Bundy Canyon Basin, which would include vegetation removal. Acreages of impacts are presented within Table 5. Within Phase 1, Project-related impacts would occur to portions of ED-01 along the southern boundary of the proposed Bundy Canyon Basin including the concrete-lined channel west and south of the proposed basin (existing Lateral C). All of these features are potentially jurisdictional to the USACE under Section 404 of the CWA and SWRCB under Section 401 of the CWA.

Table 5. Phase 1 Impacts to Aquatic Resources	
Waters of the U.S.	Acreage/Linear Feet
ED-01	0.90/1,878
Bundy Canyon Wash (ED-02, ED-03, ED-04 and ED-10)	0
ED-05	0
ED-06	0
ED-07	0
ED-08	0
ED-09	0
TOTAL	0.90/1,878
CDFW Type	Acreage
Streambeds	
ED-01	1.07/1,878
Bundy Canyon Wash (ED-02, ED-03, ED-04 and ED-10)	0
ED-05	0
ED-06	0
ED-07	0
ED-08	0
ED-09	0
TOTAL	1.07/1,878
Riparian Vegetation	
Mule Fat Thickets (ED-01)	0.44
Riversidean Alluvial Fan Sage Scrub	0.11
Red Willow Thickets (ED-07)	0

Mule Fat Thickets occur along the south side of this undeveloped parcel along Bundy Canyon Wash (ED-03). One Fremont's cottonwood is located near the eastern end of the wash and is included in the Mule Fat Thicket mapping category. There is also a patch of Riversidean Alluvial Fan Sage Scrub associated with Bundy Canyon Wash, which is considered to be a CDFW habitat due to its unique association with streambed habitat. These habitats, along with their associated streambeds are potentially jurisdictional to the CDFW under the California Fish and Game Code. Additionally, preparation of a DBESP will be required to satisfy MSHCP requirements for impacts to the riparian areas along Bundy Canyon Wash.

It should be noted that an area of riparian habitat (Southern Willow Scrub) is present along the western boundary of the basin (see Figure 3. *Wildomar Lateral C Vegetation*); however, this habitat does not appear to be associated with a drainage and is likely not jurisdictional to USACE, SWRCB, or CDFW.

6.1.2 Indirect Impacts

Within the proposed Bundy Canyon Basin area, a portion of ED-01 is directly affected by the Project activities. These acreages have been calculated and are presented above under the direct impacts section, and those impacts will require mitigation and regulatory permitting from the CDFW, USACE, and RWQCB. There will be approximately 218 linear feet of ED-01 remaining, which is located outside of the direct area of impact, as well as a combination of Riversidean Alluvial Fan Sage Scrub and mule fat thicket. The flows from Lateral A which feed these areas will no longer persist as a result of basin construction.

These two habitat areas are composed of sparse, xeric vegetation that does not require substantial hydrology in order to be sustained. Riversidean Alluvial Fan Sage Scrub, for instance, is known to persist within upper terraces of broad floodplains of larger streams, even without being exposed to frequent or regular flood events, although the vegetative composition of the habitat may change over time. The streambed and mule fat thicket areas are likely to persist for some time, although the streambed will no longer be subject to scour events and is expected to eventually become vegetated with Riversidean Alluvial Fan Sage Scrub, which dominates the hillside just to the south of the wash. The loss of water resources for wildlife located along ED-01 in the vicinity of the proposed Bundy Canyon Basin is expected to be partially offset by the basin itself, but the loss of 218 linear feet (0.05 acre) of streambed is still being considered as an indirect impact for the Project.

Construction of the laterals as part of Phase 2 of the Project will also provide protection of stream flows within Bundy Canyon Wash downstream of I-15, by allowing for a low flow outlet at a lower elevation than the proposed lateral. Currently this portion of the wash, at the I-15 undercrossing, has a capacity for handling up to 1,080 cubic feet per second (CFS) of runoff. This same level of CFS is expected to persist post-project due to the construction of the low-flow outlet. In other words, the purpose of the Bundy Canyon Basin and revision of Lateral C is primarily to alleviate excessive storm flows, rather than to eliminate normal flows.

Bundy Canyon Wash below I-15 is sparsely vegetated by scattered mule fat, some patches of tree of heaven (non-native, invasive plant), and a few willows. The wash is fed hydrologically by a combination of

upstream flows as well as localized urban runoff from landscaping, stock watering, and other forms of urban runoff. Since the wash is currently dominated by relatively xeric habitats, and both flows and the urban runoff elements will persist after construction, it is expected that the habitats within Bundy Canyon Wash downstream of I-15 will remain similar to what is present currently. For these reasons, we do not assess indirect impacts to Bundy Canyon Wash.

6.2 Phase 2 (Proposed Lateral C Mainline, Lateral C-2, Lateral C-3)

6.2.1 Direct Impacts

Phase 2 of the Project would involve construction of the revised Lateral C Mainline, Lateral C-2, and Lateral C-3 facilities. There were constraints to analyzing these impacts, because the information needed for surrounding potential development projects next to these laterals have not yet been finalized.

Three ephemeral drainages were mapped within the Phase 2 area, all of which are potentially jurisdictional to USACE, CDFW, and SWRCB. A small patch of disturbed Red Willow Thickets is located north of the proposed Lateral C-2, along the northern boundary of Baxter Road. This patch of riparian habitat was heavily disturbed from nonnative plants and previous agricultural activities from an old olive grove. This riparian habitat is protected under the MSHCP, and any impacts to this area would require preparation of a DBESP to satisfy MSHCP requirements. However, all of the drainage features and associated habitat to the north of Baxter Road are anticipated to be impacted as part of an existing development proposal. These flood control facilities are dependent on approval and implementation of development within the immediate vicinity. Likewise, features to the south of Baxter Road are not anticipated to be impacted by this Project because a development project is planned for the empty parcel south of Baxter Road and east of Central Avenue. The development plans for this parcel, however, have not yet been finalized and a CEQA document for the project has not yet been adopted. Acreages of impacts are presented within Table 6.

Table 6. Phase 2 Impacts to Aquatic Resources	
Waters of the U.S.	Acreage/Linear Feet
ED-01	0
Bundy Canyon Wash (ED-02, ED-03, ED-04 and ED-10)	0
ED-05	0
ED-06	0
ED-07	0
ED-08	0
ED-09	0
TOTAL	0

Table 6. Phase 2 Impacts to Aquatic Resources	
CDFW Type	Acreage
Streambeds	
ED-01	0
Bundy Canyon Wash (ED-02, ED-03, ED-04 and ED-10)	0
ED-05	0
ED-06	0
ED-07	0
ED-08	0
ED-09	0
TOTAL	0
Riparian Vegetation	
Mule Fat Thickets (Bundy Canyon Wash)	0
Red Willow Thickets (ED-07)	0
TOTAL	0

Permitting and analysis of impacts to these features are likely to arise from coordination with regulatory agencies regarding development projects planned to the north and south of Baxter Road.

6.2.2 Indirect Impacts

Currently, indirect impacts are not assessed for Phase 2. There were constraints to analyzing these impacts, because the information needed for surrounding potential development projects next to these laterals have not yet been finalized.

7.0 REFERENCES

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- _____. 1993b. "Lake Elsinore, California" 7.5-minute Quadrangle.

LIST OF ATTACHMENTS

Attachment A - Wetland Determination Data Forms - Arid West Region

Attachment B - Plant Species Observed Onsite

Attachment C - Representative Site Photographs

Wetland Determination Data Forms - Arid West Region

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Wildomar MDP Lateral C City/County: Riverside County Sampling Date: June 25, 2019
 Applicant/Owner: Riverside County Flood Control and Water Conservation District State: CA Sampling Point: SP1
 Investigator(s): S. Taylor Section, Township, Range: T6S, R4W
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 5
 Subregion (LRR): LRR-C Lat: 33.625737 Long: -117.266554 Datum: NAD83
 Soil Map Unit Name: Monserate NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Slight depression/low grade slope. Area has been mowed recently	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>200 sq ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Salix goodingii</u>	<u>10</u>	<u>yes</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)														
2. <u>Salix laevigata</u>	<u>10</u>	<u>yes</u>	<u>FACW</u>															
3. _____																		
4. _____																		
	<u>20</u>	= Total Cover																
Sapling/Shrub Stratum (Plot size: <u>200 sq ft</u>)				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>20</u></td> <td>x 2 = <u>40</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>101</u></td> <td>x 5 = <u>505</u></td> </tr> <tr> <td>Column Totals: <u>126</u> (A)</td> <td><u>560</u> (B)</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>20</u>	x 2 = <u>40</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>101</u>	x 5 = <u>505</u>	Column Totals: <u>126</u> (A)	<u>560</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>20</u>	x 2 = <u>40</u>																	
FAC species <u>5</u>	x 3 = <u>15</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>101</u>	x 5 = <u>505</u>																	
Column Totals: <u>126</u> (A)	<u>560</u> (B)																	
1. <u>Bromus diandrus</u>	<u>10</u>	<u>yes</u>	<u>UPL</u>															
2. <u>Rumex crispus</u>	<u>5</u>	<u>yes</u>	<u>FAC</u>															
3. _____																		
4. _____																		
5. _____																		
	<u>15</u>	= Total Cover																
Herb Stratum (Plot size: <u>200 sq ft</u>)				Prevalence Index = B/A = _____ Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)														
1. <u>Solanum elaeagnifolium</u>	<u>1</u>		<u>UPL</u>															
2. <u>Centaurea melitensis</u>	<u>30</u>	<u>yes</u>	<u>UPL</u>															
3. <u>Amsinckia menzeisii</u>	<u>15</u>		<u>UPL</u>															
4. <u>Bromus diandrus</u>	<u>50</u>	<u>yes</u>	<u>UPL</u>															
5. _____																		
6. _____																		
7. _____																		
8. _____																		
	<u>96</u>	= Total Cover																
Woody Vine Stratum (Plot size: _____)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
1. <u>N/A</u>																		
2. _____																		
% Bare Ground in Herb Stratum <u>5</u>	% Cover of Biotic Crust <u>0</u>			Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>														

Remarks:
 Vegetation (grasses/herbs) mowed - difficult to determine exact grass species present.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Wildomar MDP Lateral C City/County: Riverside County Sampling Date: June 25, 2019

Applicant/Owner: Riverside County Flood Control and Water Conservation District State: CA Sampling Point: SP1A

Investigator(s): S. Taylor Section, Township, Range: T6S, R4W

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

Subregion (LRR): LRR-C Lat: 33.625749 Long: -117.266151 Datum: NAD83

Soil Map Unit Name: Monserate NWI classification: N/A

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

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

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

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks:					
Area has been mowed recently					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
2. _____																		
3. _____																		
4. _____																		
_____ = Total Cover				Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">Total % Cover of:</td> <td style="width: 50%; text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>65</u></td> <td>x 5 = <u>325</u></td> </tr> <tr> <td>Column Totals: <u>65</u> (A)</td> <td><u>325</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>5</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>65</u>	x 5 = <u>325</u>	Column Totals: <u>65</u> (A)	<u>325</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>65</u>	x 5 = <u>325</u>																	
Column Totals: <u>65</u> (A)	<u>325</u> (B)																	
_____ = Total Cover																		
Sapling/Shrub Stratum (Plot size: _____)																		
1. <u>N/A</u>																		
2. _____																		
3. _____																		
4. _____																		
5. _____																		
_____ = Total Cover																		
Herb Stratum (Plot size: <u>200 sq ft</u>)																		
1. <u>Bromus diandrus</u>	<u>30</u>	<u>yes</u>	<u>UPL</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)														
2. <u>Hirschfeldia incana</u>	<u>20</u>	<u>yes</u>	<u>UPL</u>															
3. <u>Amsinckia menzeisii</u>	<u>15</u>	<u>yes</u>	<u>UPL</u>															
4. _____																		
5. _____																		
6. _____																		
7. _____																		
8. _____																		
<u>65</u> = Total Cover																		
Woody Vine Stratum (Plot size: _____)																		
1. <u>N/A</u>																		
2. _____																		
_____ = Total Cover																		
% Bare Ground in Herb Stratum <u>5</u> % Cover of Blotic Crust <u>0</u>																		

Remarks:
Vegetation (grasses/herbs) mowed - difficult to determine exact grass species present.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Wildomar MDP Lateral C City/County: Riverside County Sampling Date: June 25, 2019
 Applicant/Owner: Riverside County Flood Control and Water Conservation District State: CA Sampling Point: SP2
 Investigator(s): S. Taylor Section, Township, Range: T6S, R4W
 Landform (hillslope, terrace, etc.): swale/ephemeral drainage Local relief (concave, convex, none): Concave Slope (%): 5
 Subregion (LRR): LRR-C Lat: 33.612608 Long: -117.264230 Datum: NAD83
 Soil Map Unit Name: Hanford series NWM classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: North of Baxter Road, near a grove of willows	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Eucalyptus sp.</u>	<u>10</u>	<u>yes</u>	<u>UPL</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>20</u> (A/B)														
2. <u>Salix laevigata</u>	<u>10</u>	<u>yes</u>	<u>FACW</u>															
3. _____																		
4. _____																		
	<u>20</u>	= Total Cover		Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>10</u></td> <td>x 2 = <u>20</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>55</u></td> <td>x 5 = <u>275</u></td> </tr> <tr> <td>Column Totals: <u>65</u> (A)</td> <td><u>295</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.5</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>10</u>	x 2 = <u>20</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>55</u>	x 5 = <u>275</u>	Column Totals: <u>65</u> (A)	<u>295</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>10</u>	x 2 = <u>20</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>55</u>	x 5 = <u>275</u>																	
Column Totals: <u>65</u> (A)	<u>295</u> (B)																	
Sapling/Shrub Stratum (Plot size: _____)																		
1. <u>N/A</u>																		
2. _____																		
3. _____																		
4. _____																		
5. _____																		
		= Total Cover																
Herb Stratum (Plot size: <u>200 sq ft</u>)																		
1. <u>Bromus diandrus</u>	<u>20</u>	<u>yes</u>	<u>UPL</u>															
2. <u>Hirschfeldia incana</u>	<u>10</u>	<u>yes</u>	<u>UPL</u>															
3. <u>Amsinckia menziesii</u>	<u>5</u>	<u>no</u>	<u>UPL</u>															
4. <u>Bromus madritensis ssp. rubens</u>	<u>10</u>	<u>yes</u>	<u>UPL</u>															
5. _____																		
6. _____																		
7. _____																		
8. _____																		
	<u>45</u>	= Total Cover																
Woody Vine Stratum (Plot size: _____)																		
1. <u>N/A</u>																		
2. _____																		
		= Total Cover																
% Bare Ground in Herb Stratum <u>20</u> % Cover of Biotic Crust <u>0</u>																		

Hydrophytic Vegetation Indicators:
 Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

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

Hydrophytic Vegetation Present? Yes No

Remarks:
 Tree canopy not rooted alongside the swale, but canopy overlapping sample area

ATTACHMENT B

Plant Species Observed Onsite

Plant Species Observed

Scientific Name	Common Name
VASCULAR PLANTS	
ANGIOSPERMS (DICOTYLEDONS)	
Anacardiaceae	Cashew Family
<i>Schinus mole*</i>	Peruvian peppertree
<i>Schinus terebinthifolia*</i>	Brazilian peppertree
Asteraceae	Sunflower Family
<i>Artemisia tridentata</i>	sagebrush
<i>Baccharis salicifolia</i>	mulefat
<i>Centaurea melitensis*</i>	totalote
<i>Encelia farinosa</i>	brittle bush
<i>Lepidospartum squamatum</i>	scalebroom
<i>Washingtonia filifera</i>	California fan palm
Boraginaceae	Borage Family
<i>Amsinckia menziesii</i>	common fiddleneck
Brassicaceae	Mustard Family
<i>Brassica nigra*</i>	black mustard
<i>Hirschfeldia incana</i>	shortpod mustard
Cactaceae	Cactus Family
<i>Cylindropuntia sp.</i>	cholla sp.
Chenopodiaceae	Goosefoot Family
<i>Salsola tragus*</i>	Russian thistle
Crassulaceae	Stonecrop Family
<i>Dudleya lanceolata</i>	Southern California dudleya
Cucurbitaceae	Gourd Family
<i>Cucurbita palmata</i>	coyote melon
Euphorbiaceae	Spurge Family
<i>Croton setigerus</i>	doveweed
<i>Parkinsonia florida</i>	blue palo verde
Fagaceae	Beech Family
<i>Quercus agrifolia</i>	Coast live oak
Lamiaceae	Mint Family
<i>Salvia apiana</i>	white sage
Myrtaceae	Myrtle Family
<i>Eucalyptus globus*</i>	blue gum
Oleaceae	Olive Family
<i>Olea europaea*</i>	olive tree
Platanaceae	Sycamore Family
<i>Platanus racemosa</i>	western sycamore
Polygonaceae	Knotweed Family
<i>Eriogonum fasciculatum</i>	California buckwheat
<i>Rumex crispus*</i>	curly dock
Salicaceae	Willow Family
<i>Populus fremontii</i>	Fremont's cottonwood

<i>Salix laevigata</i>	red willow
<i>Salix nigra</i>	black willow
Simaroubaceae	Quassia Family
<i>Ailanthus altissima</i> *	tree-of-heaven
Solanaceae	Nightshade Family
<i>Datura wrightii</i>	Jimsonweed
<i>Nicotiana glauca</i> *	tree tobacco
<i>Solanum elaeagnifolium</i>	silverleaf nightshade
Tamaricaceae	Tamarisk Family
<i>Tamarix sp.</i> *	tamarisk sp.
ANGIOSPERMS (MONOCOTYLEDONS)	
Poaceae	Grass Family
<i>Avena fatua</i> *	wild oat
<i>Bromus diandrus</i>	ripgut brome

*Nonnative species

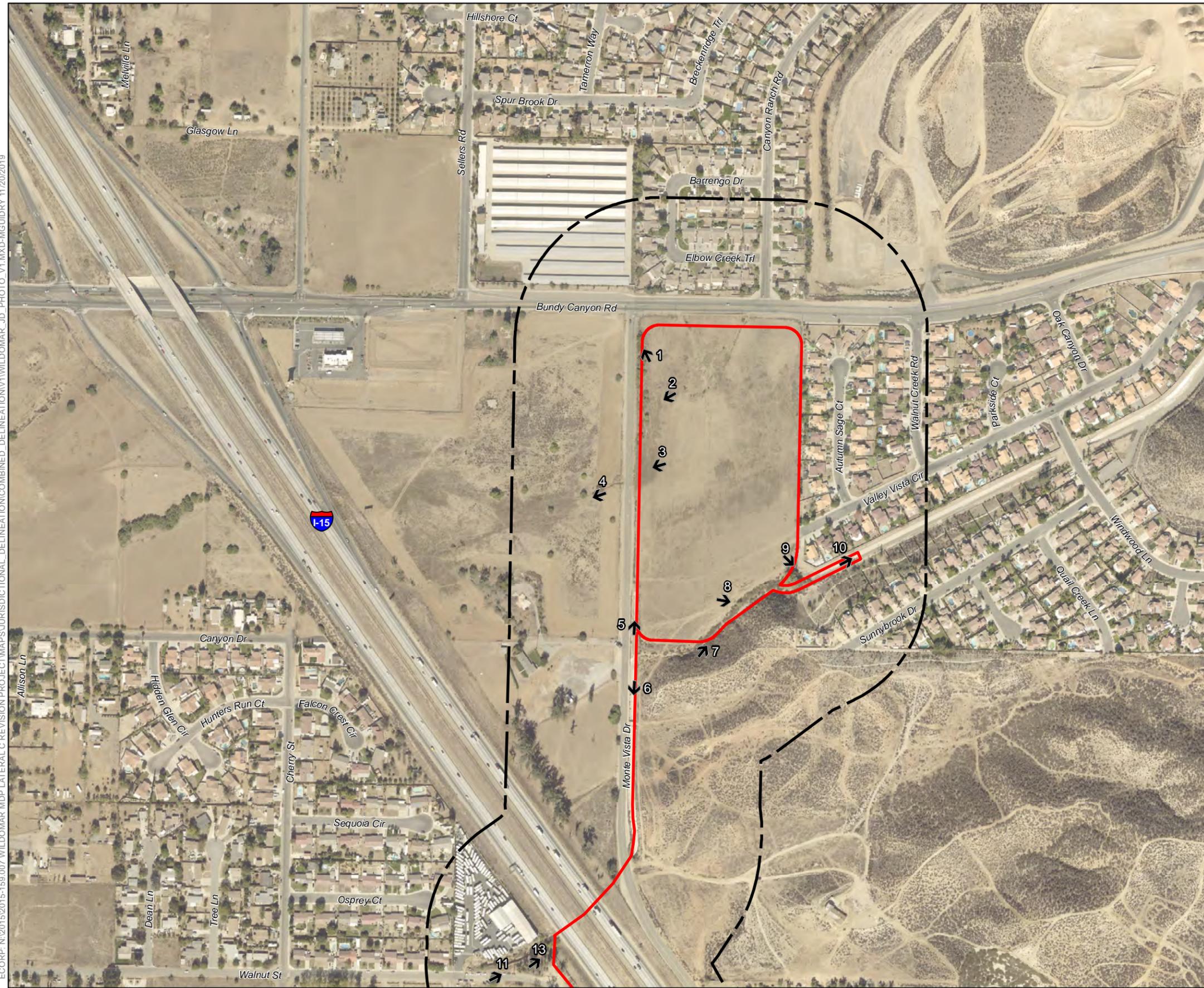
ATTACHMENT C

Representative Site Photographs

Attachment C. Photo Locations Sheet 1 of 3

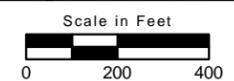
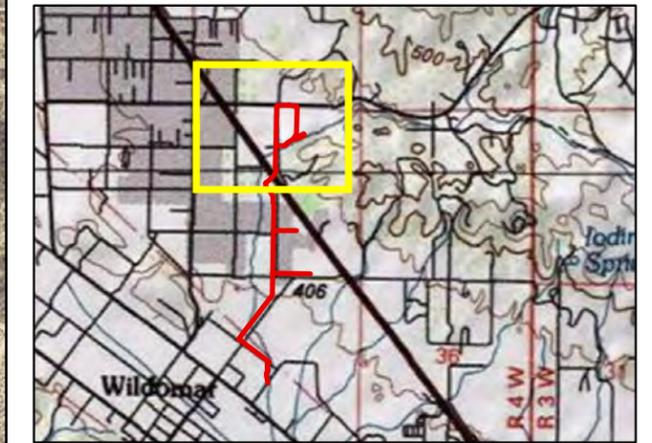
Map Features

-  Project Area
-  Delineation Area
-  Photo Location and Direction (ID)



¹ Subject to U.S. Army Corps of Engineers verification. This exhibit depicts information and data produced in accord with the wetland delineation methods described in the 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual, Arid West Region, Version 2.0, as well as the Updated Map and Drawing Standards for the South Pacific Division Regulatory Program as amended on February 10, 2016, and conforms to Los Angeles District specifications. However, feature boundaries have not been legally surveyed and may be subject to minor adjustments if more accurate locations are required.
* The acreage value for each feature has been rounded to the nearest 1/100 decimal. Summation of these values may not equal the total potential Waters of the U.S. acreage reported.

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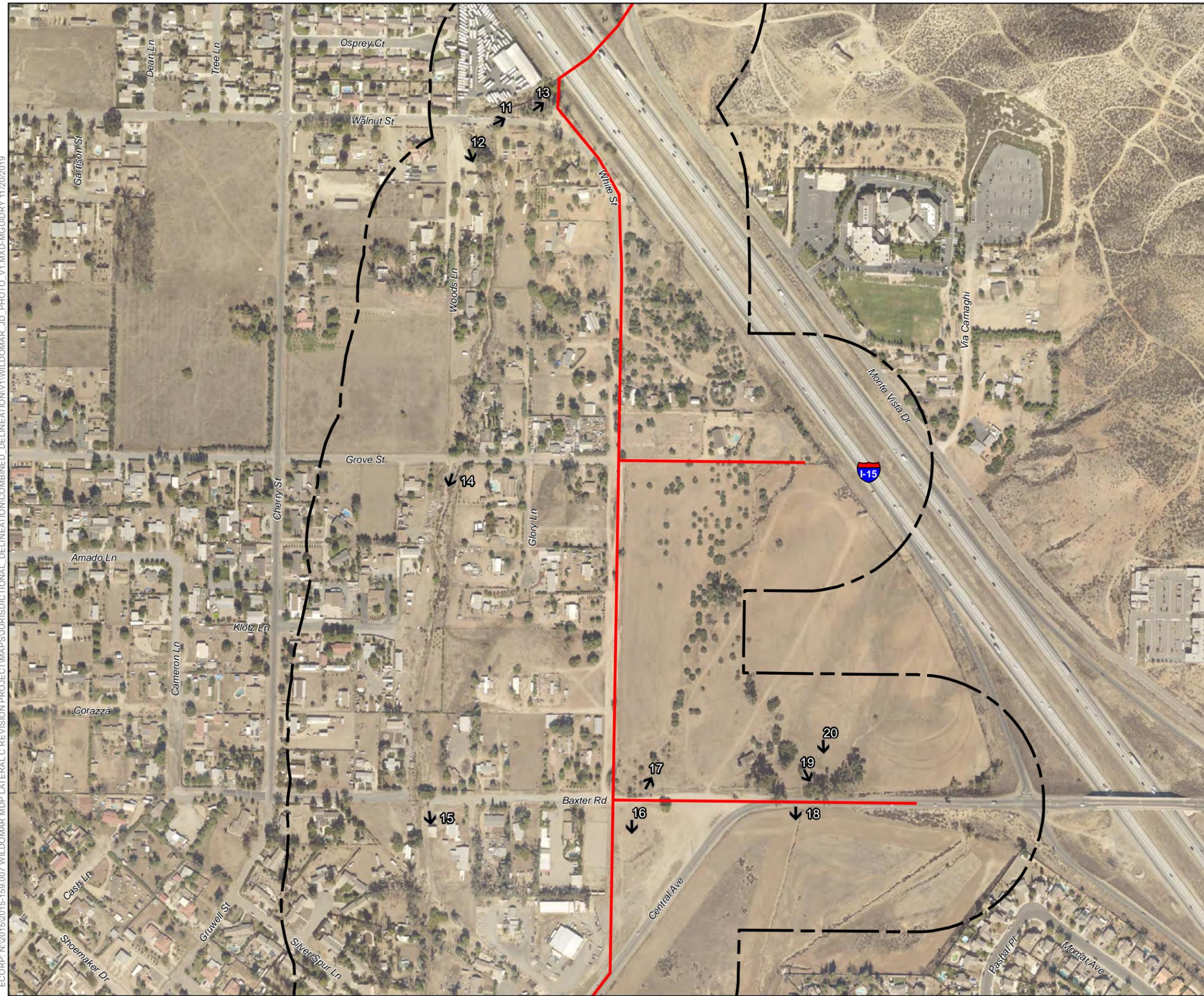


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Attachment C. Photo Locations Sheet 2 of 3

Map Features

-  Project Area
-  Delineation Area
-  Photo Location and Direction (ID)

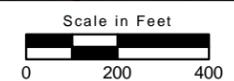


¹ Subject to U.S. Army Corps of Engineers verification. This exhibit depicts information and data produced in accord with the wetland delineation methods described in the 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual, Arid West Region, Version 2.0, as well as the Updated Map and Drawing Standards for the South Pacific Division Regulatory Program as amended on February 10, 2016, and conforms to Los Angeles District specifications. However, feature boundaries have not been legally surveyed and may be subject to minor adjustments if more accurate locations are required.
* The acreage value for each feature has been rounded to the nearest 1/100 decimal. Summation of these values may not equal the total potential Waters of the U.S. acreage reported.

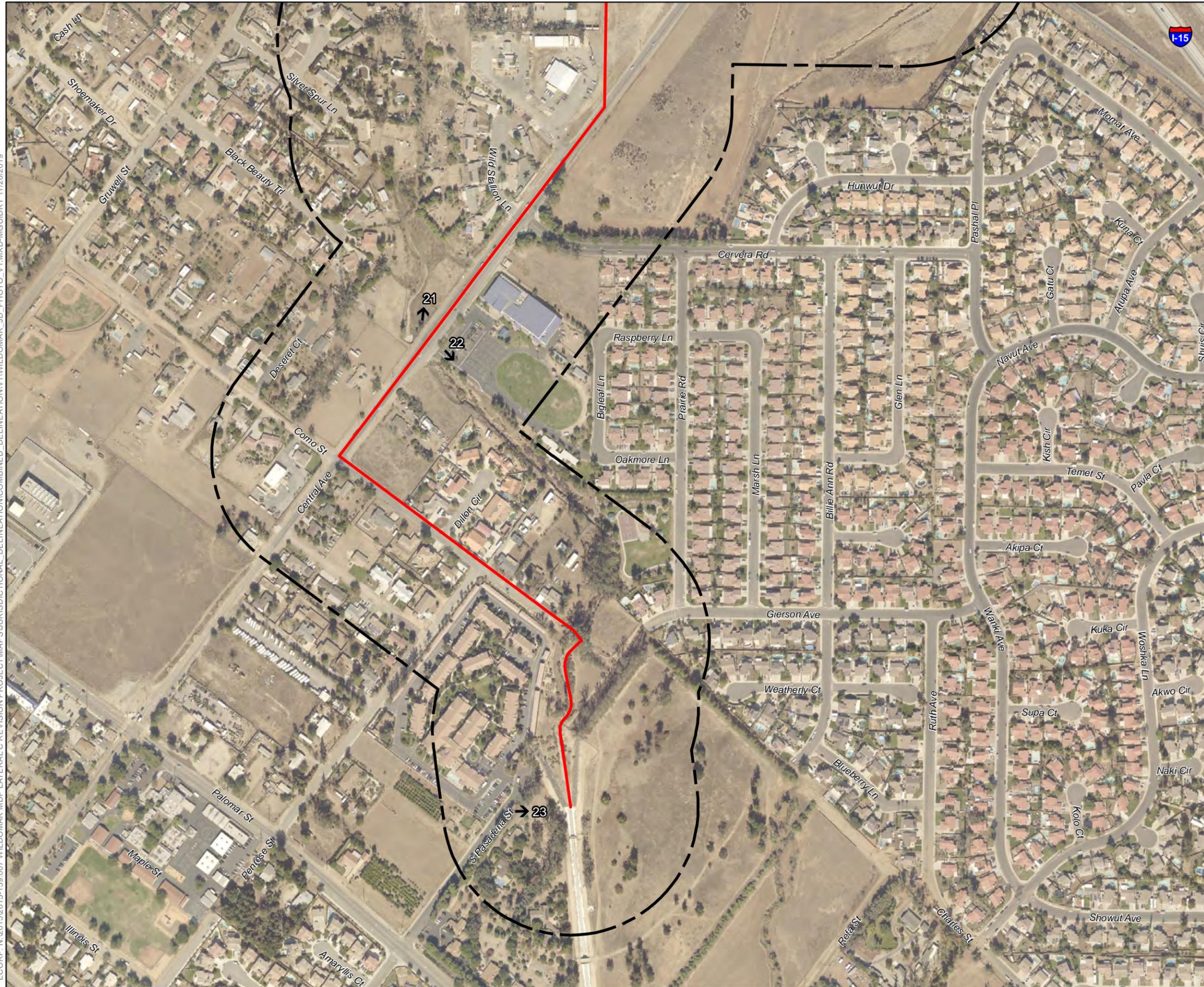
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Attachment C. Photo Locations Sheet 3 of 3

Map Features

- Project Area
- Delineation Area
- Photo Location and Direction (ID)

¹ Subject to U.S. Army Corps of Engineers verification. This exhibit depicts information and data produced in accord with the wetland delineation methods described in the 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual, Arid West Region, Version 2.0, as well as the Updated Map and Drawing Standards for the South Pacific Division Regulatory District as amended on February 10, 2016, and conforms to Los Angeles District specifications. However, feature boundaries have not been legally surveyed and may be subject to minor adjustments if more accurate locations are required.
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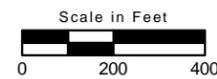




Photo 1: Culvert east of Monte Vista Drive



Photo 2: Sample Point 1 taken downstream of Photo 1 location



Photo 3: Culvert east of Monte Vista Drive and south of Photo 2 location



Photo 4: Delineation Area west of Monte Vista Drive



Photo 5: Concrete channel portion of ED-01



Photo 6: Concrete channel portion of ED-01



Photo 7: ED-01 OHWM Point Location



Photo 8: ED-01 OWHM



Photo 9: Fremont Cottonwood within in ED-01



Photo 10: Developed portion of ED-01 adjacent to residential development



Photo 11: ED-02 between Walnut Street and I-15



Photo 12: ED-03 downstream of Walnut Street



Photo 13: ED-02 channel and culvert under I-15



Photo 14: ED-04 downstream of Grove Street



Photo 15: ED-04 south of Baxter Road



Photo 16: ED-06 south of Baxter Road



Photo 17: ED-05 north of Baxter Road



Photo 18: ED-08 south of Baxter Road



Photo 19: Culvert north of Baxter Road along ED-07



Photo 20: Willows north of Baxter Road along ED-07



Photo 21: ED-04 north of Central Avenue



Photo 22: ED-10 south of Central Avenue



Photo 23: ED-10 at south end of Delineation Area