

WOODCREST PROJECT

RIVERSIDE COUNTY, CALIFORNIA

RIVERSIDE EAST USGS 7.5-MINUTE TOPOGRAPHIC QUADRANGLE
SECTION 24, TOWNSHIP 3 SOUTH, RANGE 5 WEST
APN: 245-300-001 AND -004

Delineation of State and Federal Jurisdictional Waters

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January 2025

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The undersigned certify that the statements furnished in this report and exhibits present data and information required for this biological evaluation, and the facts, statements, and information presented is a complete and accurate account of the findings and conclusions to the best of our knowledge and beliefs.



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January 2025

Executive Summary

ELMT Consulting (ELMT) has prepared this Delineation of State and Federal Jurisdictional Waters Report for the proposed Woodcrest Project (project site or site) located within Assessor Parcel Number (APN) 245-300-001 and -004 in unincorporated Riverside County, Riverside County, California within. The jurisdictional delineation documents the regulatory authority of the U.S. Army Corps of Engineers (Corps), the Regional Water Quality Control Board (Regional Board), and the California Department of Fish and Wildlife (CDFW) pursuant to Section 401 and 404 of the Federal Clean Water Act (CWA), the California Porter-Cologne Water Quality Control Act, and Sections 1600 *et. seq.* of the California Fish and Game Code.¹

Two unnamed drainage features (Drainages 1 and 2) were observed within the boundaries of the project site. Drainage 1 generally flows in a southeast to northwest direction across the middle of the project site, and Drainage 2 flows in an east to west direction across the northwest corner of the project site. The onsite drainage features receive flows via direct precipitation, and from the discharge urban runoff from residential developments upstream. Portions of Drainage 1 support a southern willow scrub plant community. The onsite drainage features are ephemeral drainage features that are not relatively permanent, standing, or a continuously flowing body of water and, therefore, are not expected to qualify as waters of the United States under the regulatory authority of the Corps (*Sackett v. EPA* (2022) 143 S. Ct. 1322, 1336). However, the onsite drainage feature will qualify as waters of the State and fall under the regulatory authority of the Regional Board and CDFW. Table ES-1 identifies the on-site jurisdictional areas including the total acreage of jurisdiction and anticipated impacts for each regulatory agency within the boundaries of the project site.

Table ES-1: Jurisdictional Areas

Jurisdictional Feature	Stream Flow	Cowardin Class	Class of Aquatic Resource	Linear Feet	Regional Board Jurisdiction		CDFW Streambed	
					On-Site Jurisdiction	Impacts	On-Site Jurisdiction	Impacts
Drainage 1	Ephemeral	Riverine	Non-Section 10 Non-Wetland and Wetland	4,795	1.12	0.14	2.24	0.24
Drainage 2	Ephemeral	Riverine	Non-Section 10 Non-Wetland	803	0.25	0.00	0.75	0.0
TOTALS				5,598	1.37	0.14	2.99	0.24

¹ The field surveys for this jurisdictional delineation were conducted on January 4, 2022 pursuant to the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0* (Corps 2008); and *Minimum Standards for Acceptance of Aquatic Resources Delineation Reports* (Corps 2017); *The MESA Field Guide: Mapping Episodic Stream Activity* (CDFW 2014); and a *Review of Stream Processes and Forms in Dryland Watersheds* (CDFW 2010).

The project applicant will likely be required to obtain the following regulatory approvals prior to impacts occurring within the identified jurisdictional areas: Corps Approved Jurisdictional Determination/Waiver; Regional Board CWA Section Report of Waste Discharge; and CDFW Section 1602 Streambed Alteration Agreement (SAA). Refer to Sections 1-7 for a detailed analysis of site conditions and regulatory requirements.

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Section 1 Introduction

This delineation has been prepared for the proposed Woodcrest Project located within APN 245-300-001 in unincorporated Riverside County, California (Project) in order to document the potential jurisdictional authority of the U.S. Army Corps of Engineers (Corps), the Regional Water Quality Control Board (Regional Board), and the California Department of Fish and Wildlife (CDFW) pursuant to Section 401 and 404 of the Federal Clean Water Act (CWA), the California Porter-Cologne Water Quality Control Act and Sections 1600 *et seq.* of the California Fish and Game Code. The analysis presented in this report is supported by field surveys and verification of site conditions conducted on January 4, 2022.

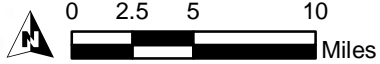
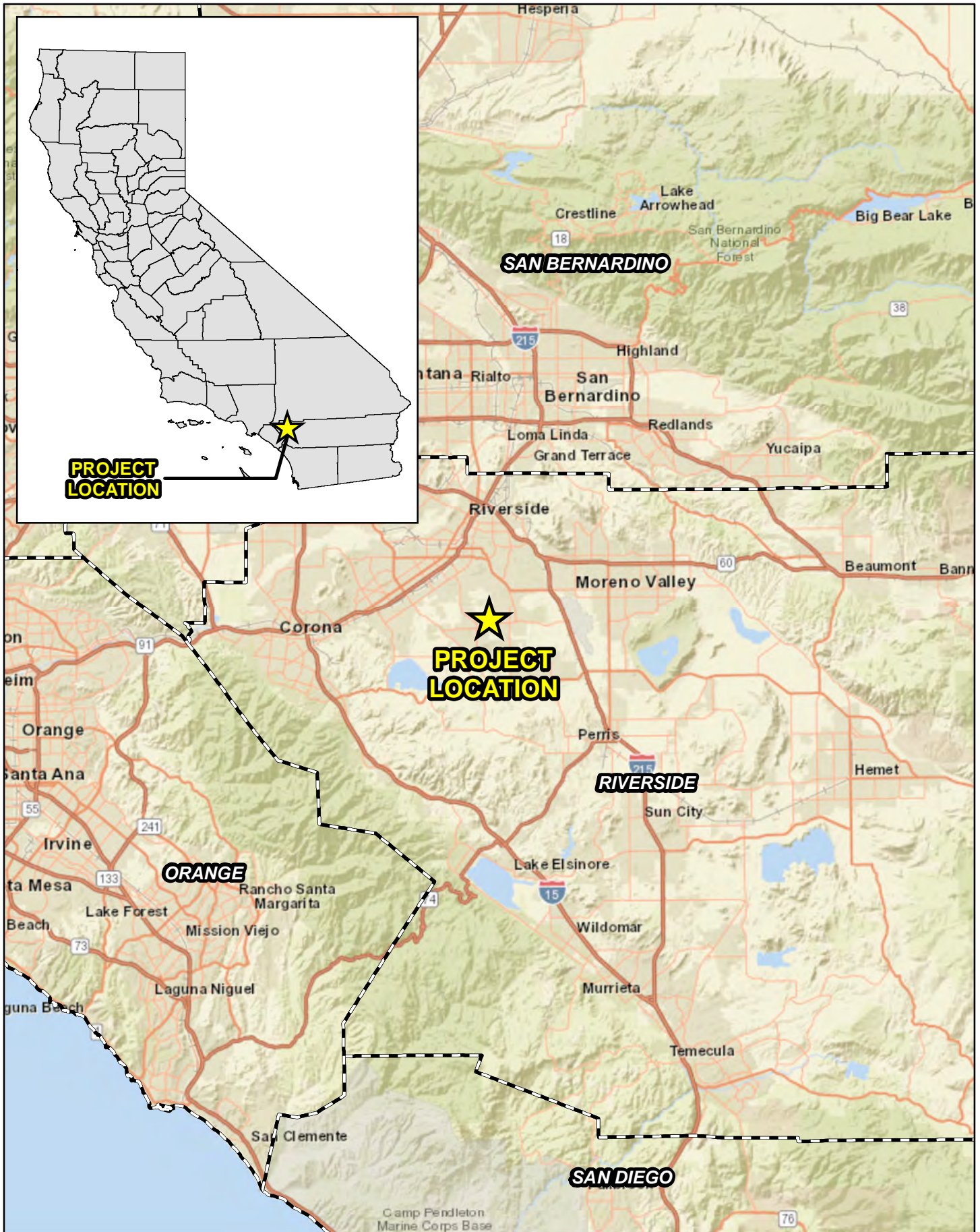
This jurisdictional delineation explains the methodology undertaken by ELMT Consulting (ELMT) to define the regulatory authority of the aforementioned regulatory agencies and documents the findings made by ELMT. This report documents the jurisdictional boundaries using the most up-to-date regulations, written policy, and guidance from the regulatory agencies.

1.1 PROJECT LOCATION

The site is generally located southeast of Interstate 91, west of Interstate 215 and east of Interstate 15 in unincorporated Riverside County California (Exhibit 1, *Regional Vicinity*). The site is depicted on the Riverside East quadrangle of the United States Geological Survey's (USGS) 7.5-minute topographic map series within Section 24 of Township 3 South, Range 5 West (Exhibit 2, *Site Vicinity*). Specifically, the project site is north of Iris Avenue, south of Gentian Avenue, west of Chicago Avenue and east of Porter Avenue within Assessor Parcel Number (APN) 245-300-001 and -004 (Exhibit 3, *Project Site*).

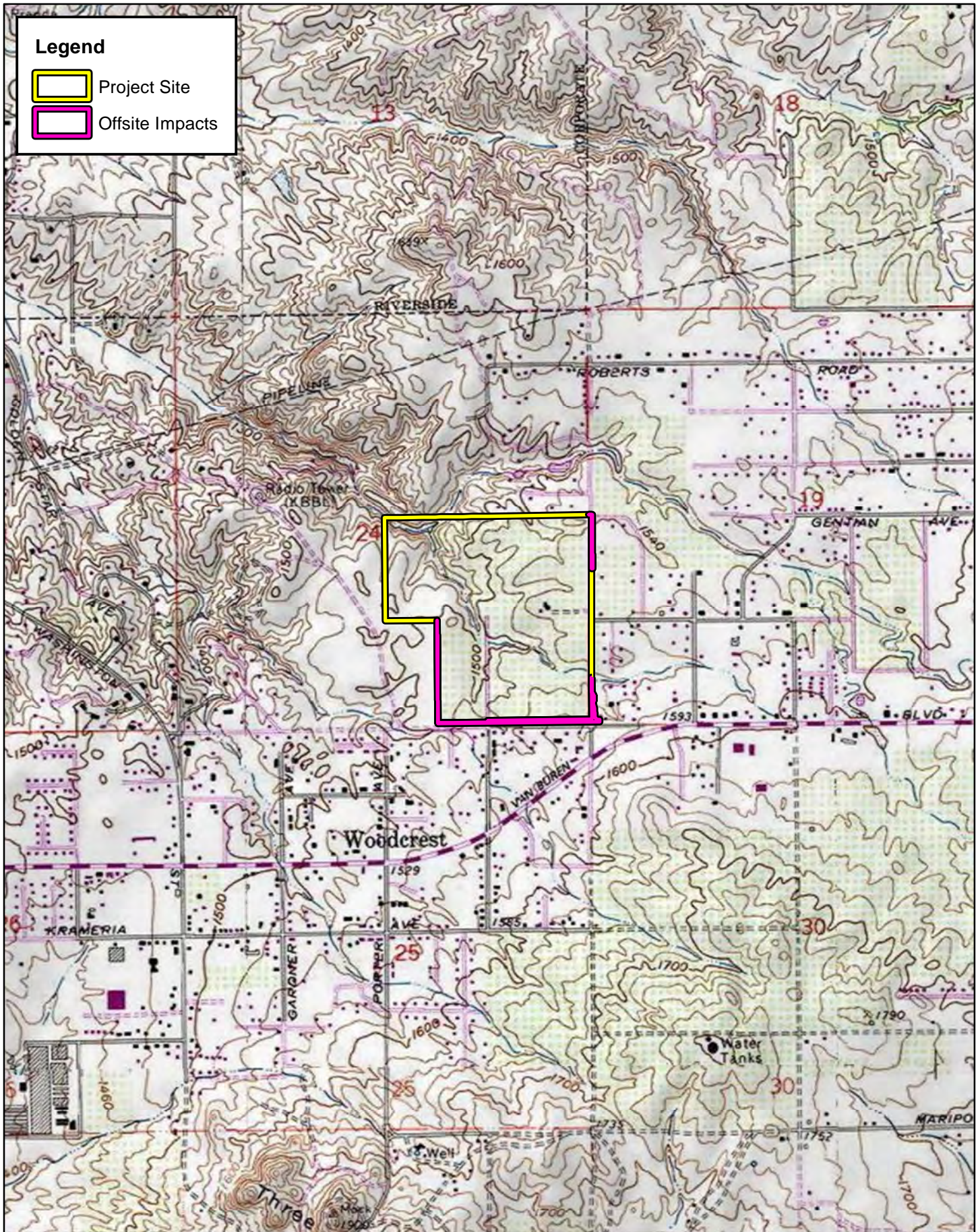
1.2 PROJECT DESCRIPTION

The project proposes to develop a Tentative Tract Map No. 38510 with 231 residential lots. The project will include offsite improvements to the frontage road and the road on the northeast corner of the site. No temporary impact areas are proposed.



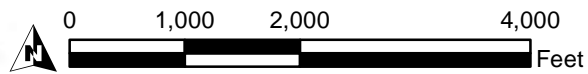
Source: World Street Map, Riverside County

WOODCREST PROJECT
Regional Vicinity



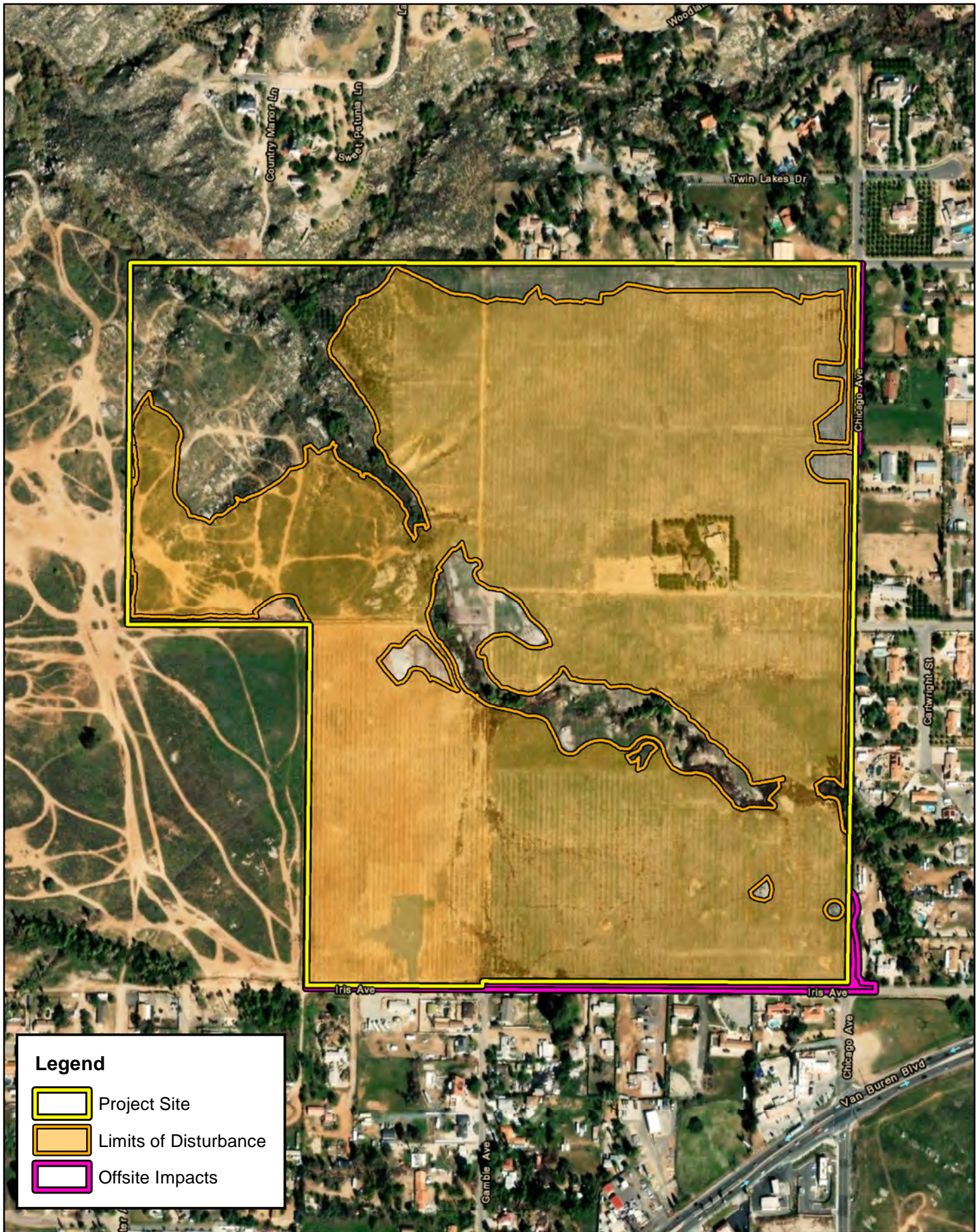
Legend

- Project Site
- Offsite Impacts

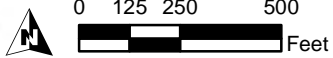


Source: USA Topographic Map, Riverside County

WOODCREST PROJECT
Site Vicinity



WOODCREST PROJECT
Project Site



Source: ESRI Aerial Imagery, Riverside County

Section 2 Regulations

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Division regulates activities pursuant to Section 404 of the CWA, Section 10 of the Rivers and Harbors Act, and Section 103 of the Marine Protection, Research, and Sanctuaries Act. The Regional Board regulates activities pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act and the CDFW regulates activities under Sections 1600 *et seq.* of the California Fish and Game Code.

2.1 U.S. ARMY CORPS OF ENGINEERS

Since 1972, the Corps and U.S. Environmental Protection Agency (EPA) have jointly regulated the discharge of dredged or fill material into waters of the United States, including wetlands, pursuant to Section 404 of the CWA. The Corps and EPA define “fill material” to include any “material placed in waters of the United States where the material has the effect of: (i) replacing any portion of a water of the United States with dry land; or (ii) changing the bottom elevation of any portion of the waters of the United States.” Examples include, but are not limited to, sand, rock, clay, construction debris, wood chips, and “materials used to create any structure or infrastructure in the waters of the United States.” The terms *waters of the United States* and *wetlands* are defined under CWA Regulations 33 Code of Federal Regulations (CFR) §328.3 (a) through (b).

2.2 REGIONAL WATER QUALITY CONTROL BOARD

Pursuant to Section 401 of the CWA, any applicant for a federal license or permit to conduct any activity which may result in any discharge to waters of the United States must provide certification from the State or Indian tribe in which the discharge originates. This certification provides for the protection of the physical, chemical, and biological integrity of waters, addresses impacts to water quality that may result from issuance of federal permits and helps insure that federal actions will not violate water quality standards of the State or Indian tribe. In California, there are nine Regional Boards that issue or deny certification for discharges to waters of the United States and waters of the State, including wetlands, within their geographical jurisdiction. The State Water Resources Control Board (SWRCB) assumes this responsibility when a project has the potential to result in the discharge to waters within multiple Regional Boards.

Additionally, the California Porter-Cologne Water Quality Control Act gives the State very broad authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. The Porter-Cologne Water Quality Control Act has become an important tool post *Solid Waste Agency of Northern Cook County vs. United States Corps of Engineers*² (SWANCC) and *Rapanos v. United States*³ (Rapanos) court cases with respect to the State’s regulatory authority over isolated and insignificant waters. Generally, any applicant proposing to discharge waste into a water body must file a Report of Waste Discharge in the event that there is no Section 404/401 nexus. Although “waste” is partially defined as any

² Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers, 531 U.S. 159 (2001)

³ Rapanos v. United States, 547 U.S. 715 (2006)

waste substance associated with human habitation, the Regional Board also interprets this to include discharge of dredged and fill material into water bodies.

Under the State Water Resources Control Board State Wetland Definition, an area is a wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.

2.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Sections 1600 *et seq.* of the California Fish and Game Code establishes a fee-based process to ensure that projects conducted in and around lakes, rivers, or streams do not substantially adversely impact fish and wildlife resources, or, when adverse impacts cannot be avoided, ensures that adequate mitigation and/or compensation is provided. Pursuant to Section 1602 of the California Fish and Game Code, a notification must be submitted to the CDFW for any activity that will divert or obstruct the natural flow or alter the bed, channel, or bank (which may include associated biological resources) of a river or stream or use material from a streambed. One CDFW guidance document, although not a formally adopted rule or policy, requires notification for activities taking place within rivers or streams that flow perennially or episodically and that are defined by the area in which surface water currently flows, or has flowed, over a given course during the historic hydrologic regime, and where the width of its course can reasonably be identified by physical and biological indicators. If the project will not “substantially adversely affect an existing fish or wildlife resource,” following notification to CDFW, the project may commence without an agreement with CDFW. (Fish & G. Code, § 1602(a)(4)(A)(i).)

Section 3 Methodology

The analysis presented in this report is supported by field surveys and verification of site conditions conducted on January 4, 2022. ELMT conducted a field delineation to determine the jurisdictional limits of “waters of the State” and jurisdictional streambed (including potential wetlands), located within the boundaries of the project site. While in the field, jurisdictional features were recorded on an aerial base map at a scale of 1" = 50' using topographic contours and visible landmarks as guidelines. Data points were obtained with a Garmin Map62 Global Positioning System to record and identify specific widths for ordinary high water mark (OHWM) indicators and the locations of photographs, soil pits, and other pertinent jurisdictional features, if present. This data was then transferred as a .shp file and added to the Project's jurisdictional exhibits. The jurisdictional exhibits were prepared using ESRI ArcInfo Version 10 software.

3.1 WATERS OF THE UNITED STATES

In the absence of adjacent wetlands, the limits of the Corps jurisdiction in non-tidal waters extend to the OHWM, which is defined as “. . . *that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a 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.*”^{3F3F⁴} Indicators of an OHWM are defined in *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (Corps 2008). In addition to characteristics listed above, wracking; vegetation matted down, bent, or absent; sediment sorting; leaf litter disturbed or washed away; scour; deposition; multiple observed flow events; bed and banks; water staining; and/or change in plant community.

In accordance with the Revised Definition of “Waters of the United States”; Conforming (September 8, 2023), “waters of the United States” are defined as follows:

- (a) *Waters of the United States* means:
- (1) Waters which are:
 - (i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
 - (ii) The territorial seas; or
 - (iii) Interstate waters;
 - (2) Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under [paragraph \(a\)\(5\)](#) of this section;
 - (3) Tributaries of waters identified in paragraph (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;
 - (4) Wetlands adjacent to the following waters:
 - (i) Waters identified in [paragraph \(a\)\(1\)](#) of this section; or

⁴ CWA regulations 33 CFR §328.3(e).

-
- (ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;
- (5) Intrastate lakes and ponds not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section
- (b) The following are not “waters of the United States” even where they otherwise meet the terms of [paragraphs \(a\)\(2\)](#) through [\(5\)](#) of this section:
- (1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;
 - (2) Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA;
 - (3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;
 - (4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;
 - (5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;
 - (6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;
 - (7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and
 - (8) Swales and erosional features (*e.g.*, gullies, small washes) characterized by low volume, infrequent, or short duration flow.
- (c) In this section, the following definitions apply:
- (1) **Wetlands** means those areas that are inundated or saturated by surface or ground water 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. Wetlands generally include swamps, marshes, bogs, and similar areas.
 - (2) **Adjacent** means having a continuous surface connection
 - (3) **High tide line** means the line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

- (4) **Ordinary high water mark** means that 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.
- (5) **Tidal waters** means those waters that rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by hydrologic, wind, or other effects.

Pursuant to the Corps Wetland Delineation Manual (Corps 1987), the identification of wetlands is based on a three-parameter approach involving indicators of hydrophytic vegetation, hydric soils, and wetland hydrology. In order to qualify as a wetland, a feature must exhibit at least minimal characteristics within each of these three parameters. It should also be noted that both the Regional Board and CDFW follow the methods utilized by the Corps to identify wetlands. For this Project, Corps jurisdictional wetlands are delineated using the methods outlined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0* (Corps 2008).

3.2 WATERS OF THE STATE

3.2.1 REGIONAL WATER QUALITY CONTROL BOARD

The California *Porter-Cologne Water Quality Control Act* gives the Regional Board very broad authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. The Regional Board shares the Corps' methodology for delineating the limits of jurisdiction based on the identification of OHWM indicators and utilizing the three parameter approach for wetlands. The Regional Board shares the Corps' jurisdictional methodology, unless SWANCC or Rapanos conditions are present. In the latter case, the Regional Board considers such drainage features to be jurisdictional waters of the State.

3.2.2 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Sections 1600 *et seq.* of the California Fish and Game Code applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State. Generally, the CDFW's jurisdictional limit is not defined by a specific flow event, nor by the presence of OHWM indicators or the path of surface water as this path might vary seasonally. Instead, CDFW's jurisdictional limit is based on the topography or elevation of land that confines surface water to a definite course when the surface water rises to its highest point. Further, the CDFW's jurisdictional limit extends to include any habitat (e.g. riparian), including wetlands and vernal pools, supported by a river, stream, or lake regardless of the presence or absence of hydric soils and saturated soil conditions. For this project location, CDFW jurisdictional limits were delineated using the methods outlined in the *MESA Field Guide* (Brady, III and Vyverberg 2013) and *A Review of Stream Processes and Forms in Dryland Watersheds* (Vyverberg 2010), which were developed to provide guidance on the methods utilized to describe and delineate episodic streams within the inland deserts region of southern California.

Section 4 Literature Review

ELMT conducted a thorough review of relevant literature and materials to preliminarily identify areas that may fall under the jurisdiction of the regulatory agencies. A summary of materials utilized during ELMT's literature review is provided below and in Appendix B, *Documentation*. In addition, refer to Section 7 for a complete list of references used throughout the course of this delineation.

4.1 WATERSHED REVIEW

The project site is located within the Santa Ana River Watershed (Hydrologic Unit Code 18070203). The watershed includes much of Orange County, the northwestern corner of Riverside County, the southwestern corner of San Bernardino County, and a small portion of Los Angeles County. The watershed is bound to the south by the Santa Margarita watershed, on the east by the Salton Sea and Southern Mojave watersheds, and on the north/west by the Mojave and San Gabriel watersheds. The watershed is approximately 2,800 square miles in area and substantially urbanized with approximately 32% of the land being residential, commercial, or industrial.

The watershed is located in the Peninsular Ranges and Transverse Ranges Geomorphic Provinces of Southern California (California Geological Survey Note 36). The highest elevations (upper reaches) of the watershed occur in the San Bernardino (San Gorgonio Peak – 11,485 feet in elevation) and eastern San Gabriel Mountains (Transverse Ranges Province; Mt. Baldy – 10,080 feet in elevation) and in the San Jacinto Mountains (Peninsular Ranges Province, Mt. San Jacinto – 10,804 feet in elevation). Further downstream, the Santa Ana Mountains and the Chino Hills form a topographic high before the river flows into the Coastal Plain (in Orange County) and into the Pacific Ocean. Primary slope direction is northeast to southwest, with secondary slopes controlled by local topography.

Tributaries of the Santa Ana River within Riverside County include the San Jacinto River Watershed and the Middle Santa Ana River Watershed. The headwaters of the Santa Ana River are located in the San Bernardino Mountains and include Bear Creek and Mill Creek. Other tributaries include Lytle Creek, originating in the San Gabriel Mountains, and the San Jacinto River, originating in the San Jacinto Mountains. These main tributaries come together to form the Santa Ana River in the San Bernardino Valley, located at the southern base of the Transverse Ranges of the San Bernardino Mountains. The Santa Ana River flows through the San Bernardino Valley before traversing through the Santa Ana Mountains and flowing to the Orange Coastal Plain. The Santa Ana River eventually discharges to the Pacific Ocean in the City of Huntington Beach.

4.2 LOCAL CLIMATE

Riverside County features a somewhat cooler version of a Mediterranean climate, or semi-arid climate, with warm, sunny, dry summers and cool, rainy, mild winters. Relative to other areas in southern California, winters are colder with chilly to cold morning temperatures common. Climatological data obtained for the City of Perris, directly adjacent to March Air Reserve Base, indicates the annual precipitation averages 11.4 inches per year. Almost all of the precipitation occurs in the months between December and March, with hardly any occurring between the months of April and November. The wettest month is February, with a

monthly average total precipitation of 2.86 inches. The average maximum and minimum temperatures for the City of Perris are 80.9 and 46.8 degrees Fahrenheit (F) respectively with July and August being the hottest months (monthly average high 98.0° F) and December being the coldest (monthly average low 34.0° F). Temperatures during the site visits were in the mid-60s° F with light winds and little to no cloud cover.

4.3 USGS TOPOGRAPHIC QUADRANGLE

The USGS 7.5 Minute Series Topographic Quadrangle maps show geological formations and their characteristics, describing the physical setting of an area through contour lines and major surface features including lakes, rivers, streams, buildings, landmarks, and other factors that may fall under an agency's jurisdiction. Additionally, the maps depict topography through color and contour lines, which are helpful in determining elevations and latitude and longitude within the project site.

The site is depicted on the Riverside East quadrangle of the USGS 7.5-minute topographic map series within Section 24 of Township 3 South, Range 5 West.

According to the topographic map, the project site consists entirely of vacant/undeveloped land that historically supported agricultural activities. The project site ranges in elevation from 1,415 to 1,550 feet above mean sea level. The eastern half of the project site is relatively flat with the exception of the drainage feature on the southern portion of the eastern half that flows through an area lower in elevation. The western half of the project site generally slopes from south to north towards the drainage feature that extends from the southeast corner of the western half to the northwest corner of the project site. A historic bluelines streams is observed in within the area of lower elevation, where the drainage features were observed. have been mapped onsite, but one was observed, northwest of the project site, west of Interstate 215.

4.4 AERIAL PHOTOGRAPHS

Prior to conducting the field delineation, ELMT reviewed current and historical aerial photographs of the project as available from Google Earth Pro Imagery and HistoricAerils.com. Aerial photographs can be useful during the delineation process, as they often indicate the presence of drainage features and riverine habitat within the boundaries of the project site, if any.

The site was historically supported an active orchard as well as undeveloped disturbed areas associated with unauthorized off-road vehicle use in the western portion of the project site. Adjacent land uses include rural residential development to the north, south, and east, and undeveloped open space to the west. The orange trees were removed from the project site between 2020 and 2021. The trees were run through a chipper onsite and the chips were evenly spread over the site. The chips have kept the site from revegetating. Chips were not placed on the western portion of the site. Most the western is disturbed and supports non-native grasses.

Due to several decades of agricultural use, those open areas previously associated with the orchard do not support native plant communities or natural communities of special concern. Overall, the project site supports one (1) land cover types that would be classified as disturbed. The large arroyo that runs through the site support native riparian habitat (southern willow scrub) and wetland habitat (freshwater marsh), as well as Riversidean sage scrub along the banks of the arroyo. The southern will scrub habitat has been

invaded by several non-native species such as Washingtonian palm trees and salt cedar throughout most of its length.

4.5 SOILS

Soils within and adjacent to the Project site were researched prior to the field delineation using the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Custom Soil Resource Report for Riverside County. Soil surveys furnish soil maps and interpretations originally needed in providing technical assistance to farmers and ranchers; in guiding other decisions about soil selection, use, and management; and in planning, research, and disseminating the results of the research. In addition, soil surveys are now heavily utilized in order to obtain soil information with respect to potential wetland environments and jurisdictional areas (i.e., soil characteristics, drainage, and color).

Based on the NRCS USDA Web Soil Survey, the project site is underlain by the following soil units: Bonsall fine sandy loam, Cieneba sandy loam, Cieneba rocky sandy loam, Fallbrook sandy loam, Fallbrook fine sandy loam, Monserate sandy loam, and Vista coarse sandy loam. Soils majority of the on-site have been mechanically disturbed and heavily compacted from historic land uses (i.e., agricultural activities). A description of the soils found onsite is provided below:

- The Bonsall series consists moderately well drained soils occurring on uplands and have slopes of 2 to 15 percent. These soils formed in material deeply weathered from granodiorite or tonalite. Vegetation is mainly annual grasses, forbs, and chamise.
- The Cieneba series consists of shallow, somewhat excessively drained soils with low to high runoff, moderately rapid permeability in the soil and much slower permeability in the weathered bedrock. These soils formed in material weathered from granitic rock. Cieneba soils are on hills and mountains and have slopes of 9 to 85 percent. Vegetation is mainly chaparral and chamise with widely spread foothill pine or oak tree. There are small areas of thin annual grasses and weeds.
- The Fallbrook series consists of well-drained soils that lie on uplands and have slopes of 2 to 50 percent. These soils developed on granodiorite and tonalite. The vegetation associated with the soil series is annual grasses, oaks, flat-top buckwheat, and chaparral.
- The Monserate series consists of well-drained soils that developed in alluvium from predominantly granitic material. These soils are typically found on terraces and old alluvial fans with slopes that range from 0 to 25 percent. The vegetation associated with the soil series is annual grasses, forbs, and chamise.
- The Vista series consist of well-drained soils of uplands with slopes ranging from 2 to 35 percent. These soils developed on weathered granite and granodiorite. Vegetation is typically annual grasses, forbs, and chaparral. In a few areas, the plant cover is oak woodland with an understory of grasses.

4.6 HYDRIC SOILS LIST OF CALIFORNIA

ELMT reviewed the USDA NRCS Hydric Soils List of California in an effort to verify whether on-site soils are considered to be hydric⁵. It should be noted that lists of hydric soils along with soil survey maps provide off-site ancillary tools to assist in wetland determinations, but they are not a substitute for field investigations. The presence of hydric soils is initially investigated by comparing the mapped soil series for the site to the County list of hydric soils. According to the hydric soils list, only Bonsall fine sandy loam is listed as a hydric soil in Riverside County.

4.7 NATIONAL WETLANDS INVENTORY

ELMT reviewed the U.S. Fish and Wildlife Service's (USFWS) National Wetland Inventory maps. Based on this review, two (2) riverine resources have been mapped on the project site that follow on-site topography (refer to Appendix B, *Documentation*). These two riverine resources correspond to the two drainage features on-site.

4.8 FLOOD ZONE

The Federal Emergency Management Act (FEMA) website was searched for flood data for the project site. Based on Flood Insurance Rate Map No. 0605C0740G the site is located within Zone X – areas with minimal risk of flooding. Refer to Appendix B, *Documentation*.

⁵ A hydric soil is a soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part.

Section 5 Site Conditions

ELMT biologist Travis J. McGill conducted a field delineation on November 23, 2021 to verify existing site conditions and document the extent of potential jurisdictional areas within the boundaries of the project site. ELMT field staff encountered no limitations during the field delineation.

5.1 ON-SITE FEATURES

5.1.1 DRAINAGE FEATURES

Drainage 1

Drainage 1 is the longest drainage feature on the project site. It flows from southeast to northwest as it bisects the project site and converges with Drainage 2 near the northwest corner of the site, and supports a sparse southern willow scrub plant community. The drainage enters the site from an earthen channel at the southeastern corner of the project site and flows ephemeral. The onsite drainage features receive flows via direct precipitation, and from the discharge urban runoff from residential developments upstream. Drainage 1 is approximately 4,795 linear feet with an average OHWM that ranges from 2 to 13 feet wide.

The drainage feature that bisects the project site primarily supports a southern willow scrub plant community. This plant community is dominated by arroyo willow (*Salix lasiolepis*) and black willow (*Salix goodingii*) and supports a variety of other trees and shrubs with an herbaceous understory. Other common species observed in the southern willow scrub plant community include Mexican fan palm (*Washingtonia robusta*), salt cedar (*Tamarix* sp.), giant creek nettle, mule fat, elderberry (*Sambucus mexicana* [*S. caerulea*]), bowlesia (*Bowlesia incana*), California bee plant (*Scrophularia californica*), common phacelia (*Phacelia distans*), Douglas' nightshade (*Solanum douglasii*), goldfields (*Lasthenia glabrata*), hairy leaved sunflower (*Helianthus annuus*), London rocket (*Sisymbrium irio*), needle goldfields (*Lasthenia gracilis*), stinknet (*Oncosiphon pilulifer*), virgin's bower (*Clematis pauciflora*), barley (*Hordeum murinum*), and willow baccharis (*Baccharis salicina*).

There are two smaller drainages that are part of Drainage 1 on the northwest portion of the site. These two features are small features that follow on-site topography and connect into Drainage 1. They are ephemeral features with no hydrophytic vegetation or soils.

Drainage 2

Drainage 2 is located on the northwest corner of the project site and flows in an east-west direction. The segment of the drainage that occurs within the project site is approximately 803 linear feet with an average OHWM that ranges from 12 to 18 feet wide. Flows originate east of the project site and convey natural runoff, agricultural runoff, and nuisance flows from the surrounding residential developments. Water flows through the drainage quickly and there is evidence of scouring during large storm events. Although the drainage supports a stand of southern willow scrub, there is little to no vegetation with the active channel (within the OHWM). The feature is an earthen channel with clearly defined bed and banks that conveys flows all year round. The unnamed drainage feature supports a southern willow scrub vegetation community characterized by arroyo willow (*Salix lasiolepis*; FACW) and mule fat (*Baccharis salicifolia*; FAC).

5.1.2 WETLAND FEATURES

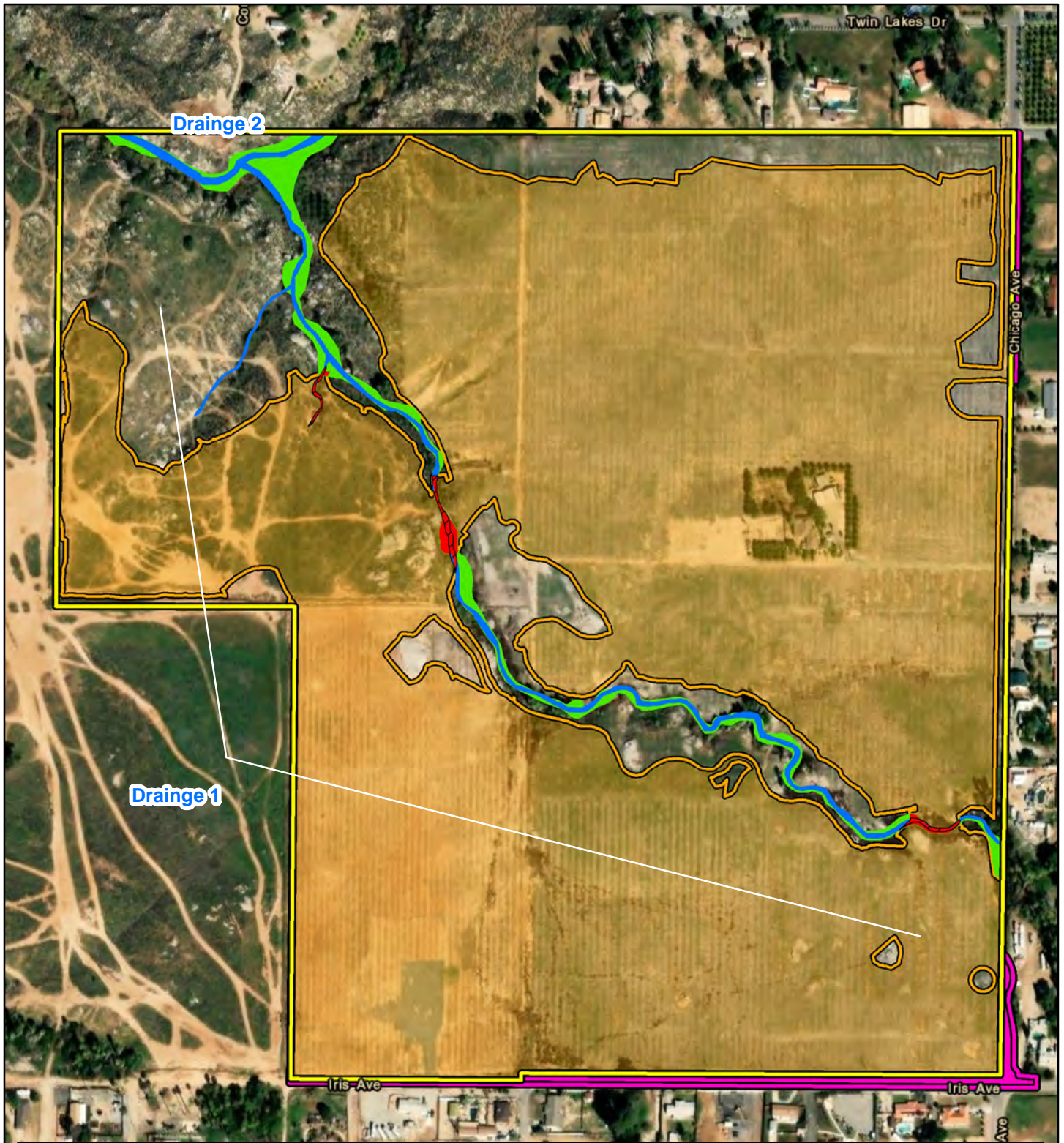
In order to qualify as a wetland, a feature must exhibit all three wetland parameters (i.e., vegetation, soils, and hydrology) described in the Corps Arid West Regional Supplement. Although evidence of hydrology (i.e., scour, changes in substrate, shelving) was present within the onsite drainage, this area was primarily dominated by nonnative plant species. Further, water does not persist long enough within the project site to create hydric soil (anaerobic) conditions, and the onsite drainage does not supported a dominance of hydrophytic vegetation. As a result, the drainage feature onsite does not meet the Corps' or Regional Board's wetland definition to qualify as jurisdictional wetlands.










WOODCREST PROJECT
 DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS
Jurisdictional Areas

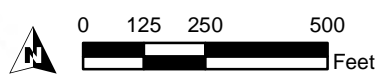


Source: ESRI Aerial Imagery, Riverside County



Legend

- | | | |
|------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
|  Project Site |  Regional Board Jurisdiction
1.37 acres (5,598 linear feet) |  RWQCB Impacts
0.14 acre (620 linear feet) |
|  Limits of Onsite Disturbance |  Riparian/Riverine Habitat
2.99 acres (5,598 linear feet) |  CDFW Associated Habitat Impacts
0.24 acre |
|  Offsite Impacts | | |



Source: ESRI Aerial Imagery, Riverside County

WOODCREST PROJECT
Jurisdictional Impacts

Section 6 Findings

This report presents the extent of jurisdictional features using the most up-to-date regulations, written policy, and guidance from the regulatory agencies. Please refer to the following sections for a summary of jurisdictional areas within the Project site.

6.1 U.S. ARMY CORPS OF ENGINEERS DETERMINATION

6.1.1 WATERS OF THE UNITED STATES DETERMINATION

The onsite ephemeral drainage feature is not relatively permanent, standing, or continuously flowing body of water and, therefore, will not qualify as waters of the United States under the regulatory authority of the Corps (*Sackett v. EPA* (2022) 143 S. Ct. 1322, 1336).

6.2 REGIONAL WATER QUALITY CONTROL BOARD

Drainage 1 exhibits characteristics consistent with the Regional Board’s methodology and would likely be considered jurisdictional waters of the State. Approximately 1.37 acre (5,598 linear feet) of Regional Board jurisdiction is located within the boundaries of the project site. Based on the proposed project footprint, approximately 0.14 acre of Regional Board waters of the State will be impacted from project implementation within Drainage 1. Refer to Table 1 for a summary of on-site jurisdictional areas, and Exhibits 5 and 6, for an illustration of on-site Regional Board jurisdictional areas and anticipated impacts.

Table 1: Regional Board Jurisdictional Waters

Jurisdictional Feature	Linear Feet	Regional Board Jurisdiction	
		On-Site Jurisdiction	Impacts
Drainage 1	4,795	1.12	0.14
Drainage 2	803	0.25	0.00
TOTAL	5,598	1.37	0.14

6.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Drainages 1 and 2 exhibit characteristics consistent with CDFW’s methodology and would be considered CDFW streambed/riparian totaling approximately 2.99 acres (5,598 linear feet) within boundaries of the project site. Based on the proposed project footprint, approximately 0.24 acre of CDFW streambed will be impacted from project implementation within Drainage 1. Refer to Table 2 for a summary of on-site jurisdictional areas, and Exhibits 5 and 6, for an illustration of on-site CDFW jurisdictional areas and anticipated impacts.

Table 2: CDFW Jurisdictional Streambed

Jurisdictional Feature	Linear Feet	CDFW Jurisdiction	
		On-Site Jurisdiction	Impacts
Drainage 1	4,795	2.24	0.24
Drainage 2	803	0.75	0.00
TOTAL	5,598	2.99	0.24

Section 7 Regulatory Approval Process

The following is a summary of the various permits, certifications, and agreements that may be necessary prior to construction and/or alteration within jurisdictional areas. Ultimately the regulatory agencies make the final determination of jurisdictional boundaries and permitting requirements.

7.1 U.S. ARMY CORPS OF ENGINEERS

The Corps regulates discharges of dredged or fill materials into waters of the United States and wetlands pursuant to Section 404 of the CWA. No Corps jurisdictional areas were identified within the project site and a CWA Section 404 permit would not be required for the proposed project.

7.2 REGIONAL WATER QUALITY CONTROL BOARD

The Regional Board regulates discharges to surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act. Any impacts to on-site jurisdictional areas will require a Report of Waste Discharge prior to project implementation. Therefore, it will be necessary for the applicant to acquire a Report of Waste Discharge prior to impacts occurring within Regional Board jurisdictional areas. The Regional Board also requires that California Environmental Quality Act (CEQA) compliance be obtained prior to obtaining the 401 Certification. A Regional Board Application fee is required with the application package and is calculated based on the acreage and linear feet of jurisdictional impacts.

7.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Pursuant to Section 1602 of the California Fish and Game Code, the CDFW regulates any activity that will divert or obstruct the natural flow or alter the bed, channel, or bank (which may include associated biological resources) of a river or stream. Therefore, impacts to the on-site jurisdictional areas will require a Section 1602 Streambed Alteration Agreement from the CDFW prior to project implementation. The notification will require a processing fee which is based on the term and cost of the proposed Project. It should also be noted that the CDFW requires that the payment of the process fee be paid and CEQA compliance be obtained prior to the issuance of the final Section 1602 Streambed Alteration Agreement.

7.4 RECOMMENDATIONS

This report presents ELMT's best effort at determining the extent of jurisdictional features using the most up-to-date regulations, written policy, and guidance from the regulatory agencies. Please refer to the following sections for a summary of jurisdictional areas within the project site.

Section 8 References

- Environmental Laboratory. 1987. *Corps of Engineers Wetland Delineation Manual*. Technical Report Y-87-1. Vicksburg, MS: U.S. Army Engineer Waterways Experiment Station, 1987.
- Google, Inc. 2021. Google Earth Pro version 7.3.4.8248 build date 7/16/2021. Historical aerial imagery from 1985 to 2021.
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- Corps. 2017. *Reissuance of the Nationwide Permits and Issuance of Final Regional Conditions for the Los Angeles District*. March 2017.
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- State Water Resources Control Board. 2019. *State wetland Definition and procedures for Discharges of Dredged or Fill Material to Waters of the State*. Adopted May 28, 2020.
- U.S. Department of Agriculture, Natural Resources Conservation Service (USDA NRCS). *List of Hydric Soils*. Accessed online at <https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/>.
- USDA NRCS. 2017. *Field Indicators of Hydric Soils in the United States: A Guide to Identifying and Delineating Hydric Soils, Version 8.1*. 2017.

U.S. Department of Homeland Security, Federal Emergency Management Agency, National Flood Insurance Program, *Flood Insurance Rate Map No. 06065C0740G*

U.S. Fish and Wildlife Service, Department of Habitat and Resource Conservation. 2019. *Wetland Geodatabase*. Accessed online at <https://www.fws.gov/wetlands/data/Mapper.html>.

Vyverberg, Kris. 2010. *A Review of Stream Processes and Forms in Dryland Watersheds*. California Department of Fish and Game. December 2010.

Appendix A Site Photographs



Photograph 1: Looking north at the riparian habitat within the arroyo as it enter the project site at the northern boundary.



Photograph 2: Looking west across the arroyo at the northwest portion of the site. Note the patches of Riversidean Sage Scrub (RSS) habitat at the top center of the photo.



Photograph 3: Marshy habitat in the southern portion of the arroyo before the arroyo turns east

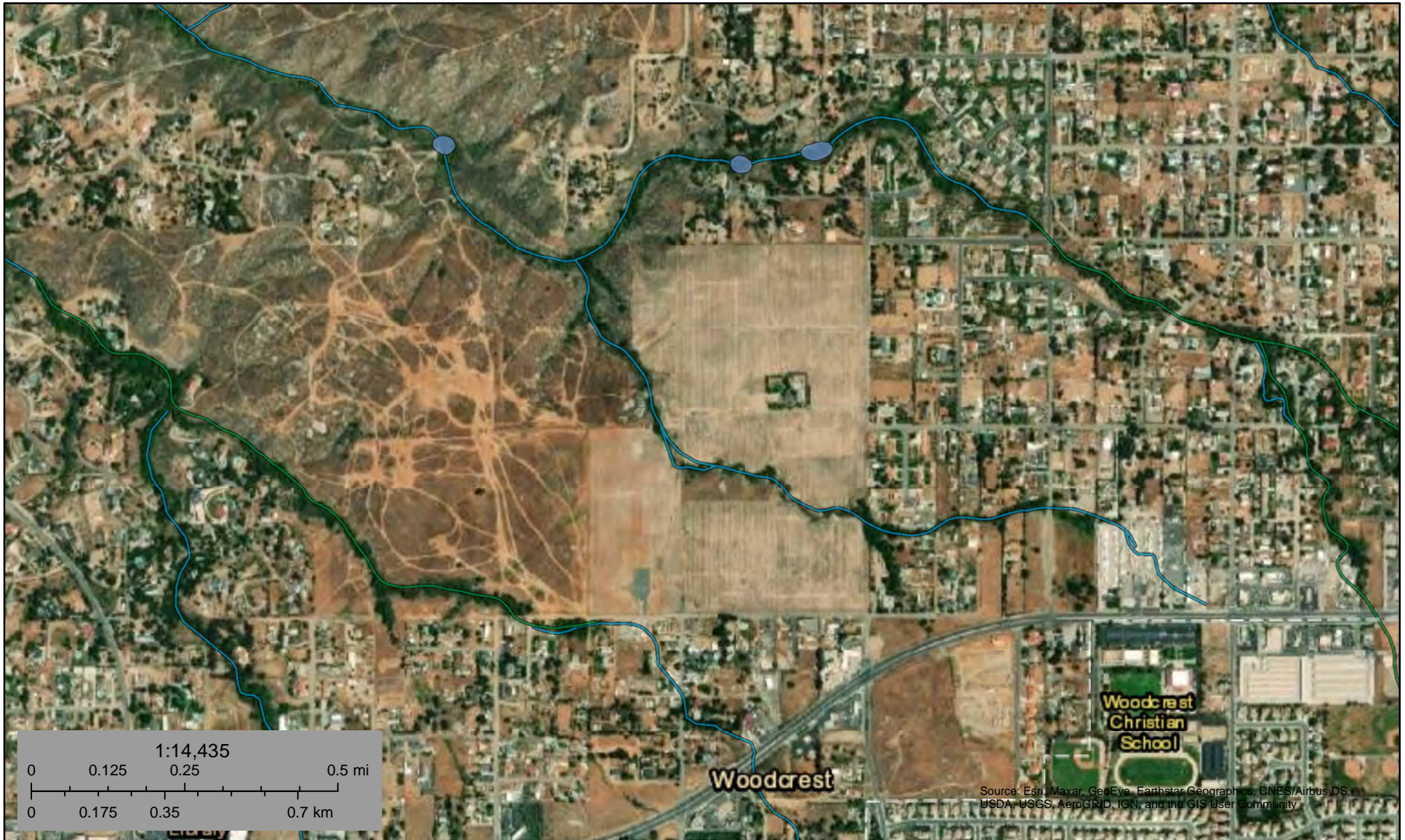


Photograph 4: Palm trees, an invasive non-native species, within the eastern portion of the arroyo



Photograph 5: Looking north across the eastern portion of the arroyo before it exits the project site at the southeast corner.

Appendix B Documentation



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

January 21, 2022

Wetlands

- | | | | | | |
|-------------------------------------------------------------------------------------|--------------------------------|-------------------------------------------------------------------------------------|-----------------------------------|---------------------------------------------------------------------------------------|----------|
|  | Estuarine and Marine Deepwater |  | Freshwater Emergent Wetland |  | Lake |
|  | Estuarine and Marine Wetland |  | Freshwater Forested/Shrub Wetland |  | Other |
| | |  | Freshwater Pond |  | Riverine |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

NOTES TO USERS

use in administering the National Flood Insurance Program. It only identifies areas subject to flooding, particularly from small scale of small size. The community map repository should be updated or additional flood hazard information.

Special information in areas where Base Flood Elevations (BFEs) have been determined. Users are encouraged to consult Floodway Data and/or Summary of Stillwater Elevations within the Flood Insurance Study (FIS) report that accompanies this map. These BFEs are intended for flood insurance purposes only and should not be used as the sole source of flood elevation. Accordingly, flood elevation data presented in the FIS is utilized in conjunction with the FIRM for purposes of floodplain management.

Flood Elevations shown on this map apply only to landward of a Vertical Datum of 1988 (NAVD 88). Users of this FIRM should consult flood elevations are also provided in the Summary of Stillwater Elevations in the Flood Insurance Study report for this jurisdiction. In the Summary of Stillwater Elevations tables should be used for floodplain management purposes when they are higher than shown on this FIRM.

Floodways were computed at cross sections and interpolated across. The floodways were based on hydraulic computations of the National Flood Insurance Program. Floodway portions floodway data are provided in the Flood Insurance Study report.

Flood Protection Measures may be protected by flood walls. Refer to Section 2.4 "Flood Protection Measures" of the Study report for information on flood control structures for this jurisdiction.

Used in the preparation of this map was Universal Transverse Mercator (UTM) datum was NAD 83 (GRS80) adopted in the Flood Insurance Study report for this jurisdiction. The use of UTM datum used in the production of this map may result in slight positional differences in map jurisdiction boundaries. These differences do not affect the FIRM.

In this map are referenced to the North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should compare flood elevations must be compared to structure and ground level to the same vertical datum. For information regarding the National Geographic Vertical Datum of 1929 and the Vertical Datum of 1988, visit the National Geographic Survey website (<http://www.ngs.noaa.gov>) or contact the National Geodetic Survey at 800-450-7000.

Services:
Survey:
Highway 20910-3282

Elevation, description, and/or location information for bench marks in this map, please contact the Information Services Branch Geomatics Survey at (951) 713-3242, or visit its website at <http://www.blr200>.

Information shown on this FIRM was derived from U.S. Geological Survey Topographic Quadrangles produced at a scale of 1:12,000 from 1984 or later.

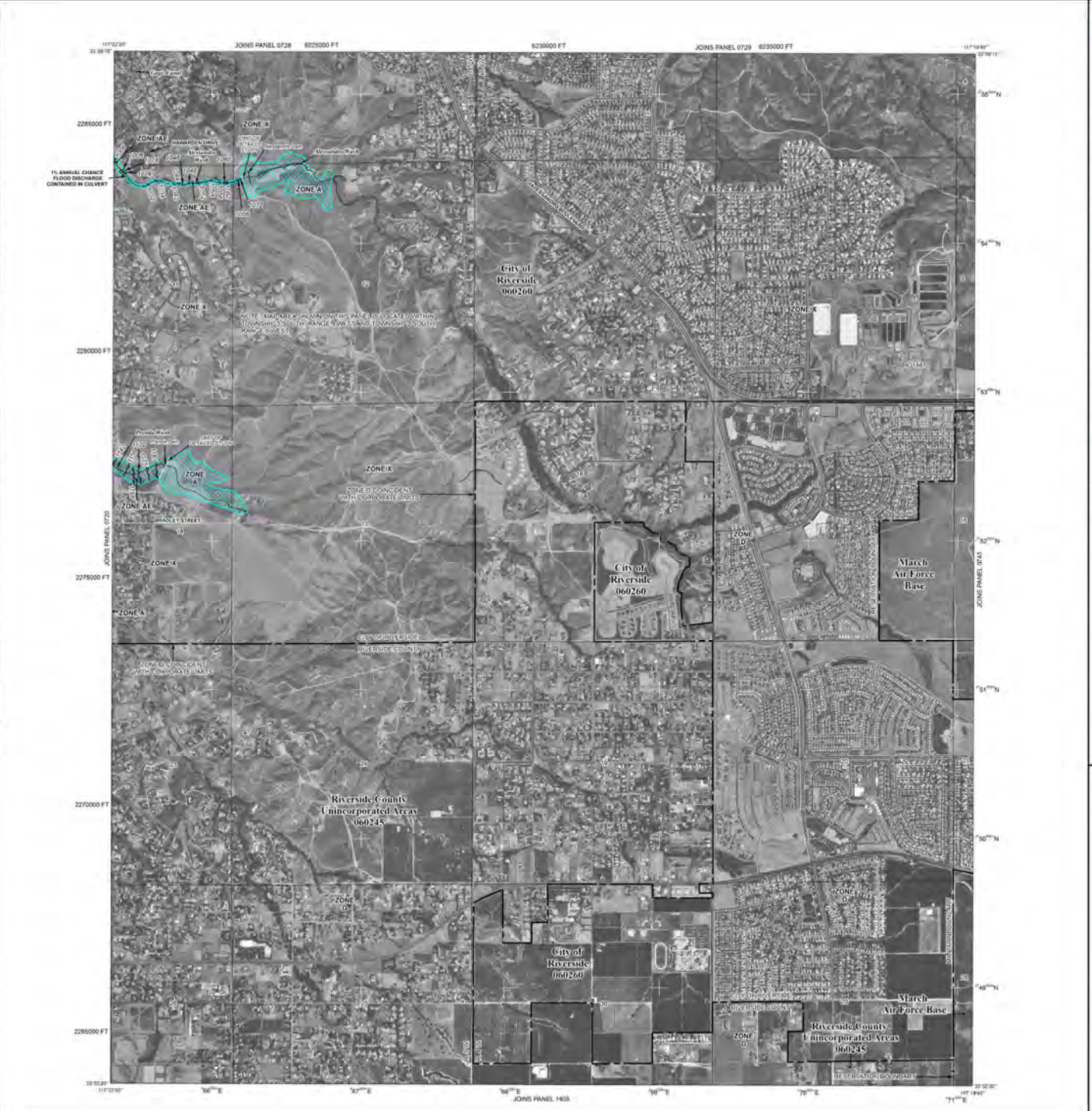
Refer to more detailed and up-to-date stream channel shown on those shown on the previous FIRM for this jurisdiction. The waterways that were transferred from the previous FIRM may have changed to these new stream channel configurations. As a result, Floodway Data in the Flood Insurance Study report (which are hydraulic data) may reflect stream channel differences that shown on this map.

Shown on this map are based on the best data available at the time this map was published. Map users should contact appropriate agencies to verify current corporate limit locations.

As separately printed Map Index for an overview map of the layout of map panels, community map repository addresses, communities table containing National Flood Insurance Program community as well as a listing of the panels on which each panel.

A Map Service Center at 1-800-358-6616 for information on products associated with this FIRM. Available products may include Letters of Map Change, a Flood Insurance Study report and/or this map. The FEMA Map Service Center may also be reached at 800-450-7000 and its website at <http://www.fema.gov>.

Questions about this map or questions concerning the National Flood Insurance Program, please call 1-877-FEMA-MAP (1-877-358-2627) or visit at <http://www.fema.gov>.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO THE 1% ANNUAL CHANCE FLOOD

- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AE1** Flood depths of 1 to 3 feet. Locally areas of no elevations determined.
- ZONE AD** Flood depths of 1 to 3 feet. Locally areas of no elevations determined. For areas of shallow flow determined.
- ZONE AR** Special Flood Hazard Area formerly protected from its flood by a flood control system that was subsequently destroyed. The former flood control system is being reconstructed. The 1% annual chance or greater flood elevation is shown.
- ZONE AS** Area to be protected from the 1% annual chance flood by a flood control system under construction. No Base Flood Elevations determined.
- ZONE AV** Coastal flood zone with velocity hazard (wave and erosion) elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave, erosion) elevations determined.

FLOODWAY AREAS IN ZONE AE
The floodway is the channel of a stream plus any adjacent floodplain area of accumulation so that the 1% annual chance flood can be carried without in flood stages.

- OTHER FLOOD AREAS**
 - ZONE X** Areas of 0.2% annual chance flood areas of 1% area average depths of area 1 to 3 feet or with drainage 1 square mile; and areas protected by levees from 1%.
- OTHER AREAS**
 - ZONE D** Areas determined to be outside the 0.2% annual chance flood areas in which flood hazards are undetermined, but not subject to the 1% annual chance flood.
 - COASTAL BARRIER RESOURCES SYSTEM (CBRS)**
 - OTHERWISE PROTECTED AREAS (OPAs)**

- CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary of Special Flood Hazard Area
- Base Flood Elevation line and value, elevation
- Base Flood Elevation value where uniform in area

- Referenced to the North American Vertical Datum of 1988
- Cross section line
- Transect line
- Geographic coordinates referenced to the datum of 1983 (NAOD 83), Universal Transverse Mercator (UTM)
- 500000 FT
- 5000-foot grid lines; California State Plane or system, zone VI (SP5000 06N), Lambert projection
- Scale: 1:50,000 (see explanation in Notes to Users)
- Scale: 1:11.5
- Scale: 1:11.5

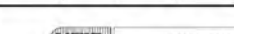
MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTPANEL FLOOD INSURANCE RATE MAP
August 15, 2006

EFFECTIVE DATES OF CHANGES TO THIS PANEL

For community map revision history prior to digitization mapping, refer to the map history table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact agent or call the National Flood Insurance Program at 1-800-450-6833.



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0740

FIRM
FLOOD INSURANCE

RIVERSIDE COUNTY CALIFORNIA AND INCORPORATED AREAS

PANEL 740 OF 3805
(SEE MAP INDEX FOR FIRM F)

COMMUNITY TABLE

COMMUNITY	INSURANCE STATUS
RIVERSIDE COUNTY	INSURABLE
RIVERSIDE CITY/TP	INSURABLE

Refer to User's Manual for Map Number of panel where special flood zones are shown. Refer to the legend for more information.

EFFE AUG

Federal Emergency Management Agency

Appendix C Methodology

WATERS OF THE UNITED STATES

In accordance with the Revised Definition of “Waters of the United States” (March 20, 2023), “waters of the United States” are defined as follows:

The “waters of the United States” are defined in paragraph (a) of this rule:

- (1) traditional navigable waters, the territorial seas, and interstate waters;
- (2) impoundments of “waters of the United States”;
- (3) tributaries to traditional navigable waters, the territorial seas, interstate waters, or impoundments when the tributaries meet either the relatively permanent standard or the significant nexus standard (“jurisdictional tributaries”);
- (4) wetlands adjacent to traditional navigable waters; wetlands adjacent to and with a continuous surface connection to relatively permanent paragraph impoundments or to jurisdictional tributaries when the jurisdictional tributaries meet the relatively permanent standard; and wetlands adjacent to impoundments or jurisdictional tributaries when the wetlands meet the significant nexus standard (“jurisdictional adjacent wetlands”); and
- (5) intrastate lakes and ponds, streams, or wetlands not identified in (1) through (4) above that meet either the relatively permanent standard or the significant nexus standard.

The “relatively permanent standard” means relatively permanent, standing or continuously flowing waters connected to traditional navigable waters, and waters with a continuous surface connection to such relatively permanent waters or to traditional navigable waters. The “significant nexus standard” means waters that, either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of traditional navigable waters, the territorial seas, or interstate waters.

WETLANDS

For this project location, Corps jurisdictional wetlands are delineated using the methods outlined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0* (Corps 2008). This document is one of a series of Regional Supplements to the Corps Wetland Delineation Manual (Corps 1987). The identification of wetlands is based on a three-parameter approach involving indicators of hydrophytic vegetation, hydric soil, and wetland hydrology. In order to be considered a wetland, an area must exhibit at least minimal characteristics within these three (3) parameters. The Regional Supplement presents wetland indicators, delineation guidance, and other information that is specific to the Arid West Region. In the field, vegetation, soils, and evidence of hydrology are examined using the methodology listed below and documented on Corps wetland data sheets, when applicable. It should be noted that both the Regional Board and the CDFW jurisdictional wetlands encompass those of the Corps.

Vegetation

Nearly 5,000 plant types in the United States may occur in wetlands. These plants, often referred to as hydrophytic vegetation, are listed in regional publications by the U.S. Fish and Wildlife Service (USFWS). In general, hydrophytic vegetation is present when the plant community is dominated by species that can tolerate prolonged inundation or soil saturation during growing season. Hydrophytic vegetation decisions are based on the assemblage of plant species growing on a site, rather than the presence or absence of particular indicator species. Vegetation strata are sampled separately when evaluating indicators of hydrophytic vegetation. A stratum for sampling purposes is defined as having 5 percent or more total plant cover. The following vegetation strata are recommended for use across the Arid West:

- ◆ *Tree Stratum*: Consists of woody plants 3 inches or more in diameter at breast height (DBH), regardless of height;
- ◆ *Sapling/shrub stratum*: Consists of woody plants less than 3 inches DBH, regardless of height;
- ◆ *Herb stratum*: Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size; and,
- ◆ *Woody vines*: Consists of all woody vines, regardless of size.

The following indicator is applied per the test method below.¹ Hydrophytic vegetation is present if any of the indicators are satisfied.

Indicator 1 – Dominance Test

Cover of vegetation is estimated and is ranked according to their dominance. Species that contribute to a cumulative total of 50% of the total dominant coverage, plus any species that comprise at least 20% (also known as the “50/20 rule”) of the total dominant coverage, are recorded on a wetland data sheet. Wetland indicator status in California (Region 0) is assigned to each species using the *National Wetland Plant List, version 2.4.0* (Corps 2012). If greater than 50% of the dominant species from all strata were Obligate, Facultative-wetland, or Facultative species, the criteria for wetland vegetation is considered to be met. Plant indicator status categories are described below:

- ◆ *Obligate Wetland (OBL)*: Plants that almost always occur in wetlands;
- ◆ *Facultative Wetland (FACW)*: Plants that usually occur in wetlands, but may occur in non-wetlands;
- ◆ *Facultative (FAC)*: Plants that occur in wetlands and non-wetlands;

¹ Although the Dominance Test is utilized in the majority of wetland delineations, other indicator tests may be employed. If one indicator of hydric soil and one primary or two secondary indicators of wetland hydrology are present, then the Prevalence Test (Indicator 2) may be performed. If the plant community satisfies the Prevalence Test, then the vegetation is hydric. If the Prevalence Test fails, then the Morphological Adaptation Test may be performed, where the delineator analyzes the vegetation for potential morphological features.

- ◆ *Facultative Upland (FACU)*: Plants that usually occur in non-wetlands, but may occur in wetlands; and,
- ◆ *Obligate Upland (UPL)*: Plants that almost never occur in wetlands.

Hydrology

Wetland hydrology indicators are presented in four (4) groups, which include:

Group A – Observation of Surface Water or Saturated Soils

Group A is based on the direct observation of surface water or groundwater during the site visit.

Group B – Evidence of Recent Inundation

Group B consists of evidence that the site is subject to flooding or ponding, although it may not be inundated currently. These indicators include water marks, drift deposits, sediment deposits, and similar features.

Group C – Evidence of Recent Soil Saturation

Group C consists of indirect evidence that the soil was saturated recently. Some of these indicators, such as oxidized rhizospheres surrounding living roots and the presence of reduced iron or sulfur in the soil profile, indicate that the soil has been saturated for an extended period.

Group D – Evidence from Other Site Conditions or Data

Group D consists of vegetation and soil features that indicate contemporary rather than historical wet conditions, and include shallow aquitard and the FAC-neutral test.

If wetland vegetation criteria is met, the presence of wetland hydrology is evaluated at each transect by recording the extent of observed surface flows, depth of inundation, depth to saturated soils, and depth to free water in the soil test pits. The lateral extent of the hydrology indicators are used as a guide for locating soil pits for evaluation of hydric soils and jurisdictional areas. In portions of the stream where the flow is divided by multiple channels with intermediate sand bars, the entire area between the channels is considered within the OHWM and the wetland hydrology indicator is considered met for the entire area.

Soils

A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper 16-20 inches.² The concept of hydric soils includes soils developed under sufficiently wet conditions to support the growth and regeneration of hydrophytic vegetation. Soils that are sufficiently wet because of artificial measures are included in the

² According to the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0 (Corps 2008), growing season dates are determined through on-site observations of the following indicators of biological activity in a given year: (1) above-ground growth and development of vascular plants, and/or (2) soil temperature.

concept of hydric soils. It should also be noted that the limits of wetland hydrology indicators are used as a guide for locating soil pits. If any hydric soil features are located, progressive pits are dug moving laterally away from the active channel until hydric features are no longer present within the top 20 inches of the soil profile.

Once in the field, soil characteristics are verified by digging soil pits along each transect to an excavation depth of 20 inches; in areas of high sediment deposition, soil pit depth may be increased. Soil pit locations are usually placed within the drainage invert or within adjoining vegetation. At each soil pit, the soil texture and color are recorded by comparison with standard plates within a *Munsell Soil Chart* (2009). Munsell Soil Charts aid in designating color labels to soils, based by degrees of three simple variables – hue, value, and chroma. Any indicators of hydric soils, such as organic accumulation, iron reduction, translocation, and accumulation, and sulfate reduction, are also recorded.

Hydric soil indicators are present in three groups, which include:

All Soils

“All soils” refers to soils with any United States Department of Agriculture (USDA) soil texture. Hydric soil indicators within this group include histosol, histic epipedon, black histic, hydrogen sulfide, stratified layers, 1 cm muck, depleted below dark surface, and thick dark surface.

Sandy Soils

“Sandy soils” refers to soil materials with a USDA soil texture of loamy fine sand and coarser. Hydric soil indicators within this group include sandy mucky mineral, sandy gleyed matrix, sandy redox, and stripped matrix.

Loamy and Clayey Soils

“Loamy and clayey soils” refers to soil materials with a USDA soil texture of loamy very fine sand and finer. Hydric soil indicators within this group include loamy mucky mineral, loamy gleyed matrix, depleted matrix, redox dark surface, depleted dark surface, redox depressions, and vernal pools.

SWANCC WATERS

The term “isolated waters” is generally applied to waters/wetlands that are not connected by surface water to a river, lake, ocean, or other body of water. In the presence of isolated conditions, the Regional Board and CDFW take jurisdiction through the application of the OHWM/streambed and/or the 3 parameter wetland methodology utilized by the Corps.