Appendix B-2

Crescent Cemetery, Conditional Use Permit CUP 230002, Delineation of State and Federal Jurisdictional Waters

March 2024

prepared by ELMT Consulting

CRESCENT CEMETERY

CONDITIONAL USE PERMIT CUP230002

UNINCORPORATED RIVERSIDE COUNTY, CALIFORNIA

DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS

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March 2024

CRESCENT CEMETERY

UNINCORPORATED RIVERSIDE COUNTY, CALIFORNIA

DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS

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.



Travis J. McGill
Director



Thomas J. McGill, Ph.D.
Managing Director

March 2024

Executive Summary

ELMT Consulting (ELMT) has prepared this Delineation of State and Federal Jurisdictional report for the Crescent Cemetery project located in unincorporated Riverside County, California. 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]

One (1) unnamed drainage feature (Drainage 1) was observed within the boundaries of the project site at the time of the investigation. Drainage 1 extends from south to north within the northwest region of the project site. Drainage 1 conveys flows, primarily outside of the proposed limits of disturbance before terminating near the northwest corner of the site. Drainage 1 receives flows direct precipitation upstream and from the discharge waters of a well in the middle of the drainage, outside the proposed limits of disturbance, which was installed to provide water to onsite agricultural activities. The upstream portion of Drainage 1 appears to only support surface water immediately following storm events. Portions of Drainage 1 support a mixed riparian scrub plant community.

The onsite ephemeral drainage feature is not relatively permanent, standing, or a 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). However, the onsite drainage feature will qualify was waters of the State and fall under the regulatory authority of the Regional Board and CDFW. Table ES-1 identifies the on-site jurisdictional including the total acreage of jurisdiction and anticipated impacts for each regulatory agency within the boundaries of the project site.

Table ES-1: Jurisdictional Area and Impact Analysis

Jurisdictional Feature	Corps/Regional Board Jurisdiction		CDFW Jurisdictional Streambed	
	On-Site Jurisdiction Acreage (Linear Feet)	**Jurisdictional Impacts** Acreage (Linear Feet)	**On-Site Jurisdiction** Acreage (Linear Feet)	**Jurisdictional Impacts** Acreage (Linear Feet)
Drainage 1	0.13 (1,360)	0.007 (96)	0.93 (1,360)	0.036 (96)
TOTAL	**0.13 (1,360)**	**0.007 (96)**	**0.93 (1,360)**	**0.036 (96)**

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

[1] The field survey for this jurisdictional delineation was conducted on November 13 and 16, 2023 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).

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 Crescent Cemetery Project in order to document the 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 a field survey of site conditions conducted on November 13 and 16, 2023.

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 presents our best effort at documenting the jurisdictional boundaries using the most up-to-date regulations, written policy, and guidance from the regulatory agencies. Ultimately the regulatory agencies make the final determination of jurisdictional boundaries.

1.1 PROJECT LOCATION

The project site is generally located north and east of Interstate 15, south of State Route 74, and west of Interstate 215 in Riverside County, California (Exhibit 1, *Regional Vicinity*). The project site is depicted on the Lake Elsinore quadrangle of the United States Geological Survey's (USGS) 7.5-minute topographic map within Section 22 of Township 5 South, Range 4 West (refer to Exhibit 2, *Site Vicinity,* and Exhibit 3, *Project Site (Aerial View)*). Specifically, the proposed project site is located south of River Road, west of the San Jacinto River, north of Canyon Lake, and east of Jarvis Street within Assessor Parcel Numbers (APN) 349-170-003, -004, -005, -006, -007, -008, -009, -010, -011, -012, and -013; and 349-180-002, -004, -005, -006, -007, -008, -016, -017, -020, and -035.

1.2 PROJECT DESCRIPTION

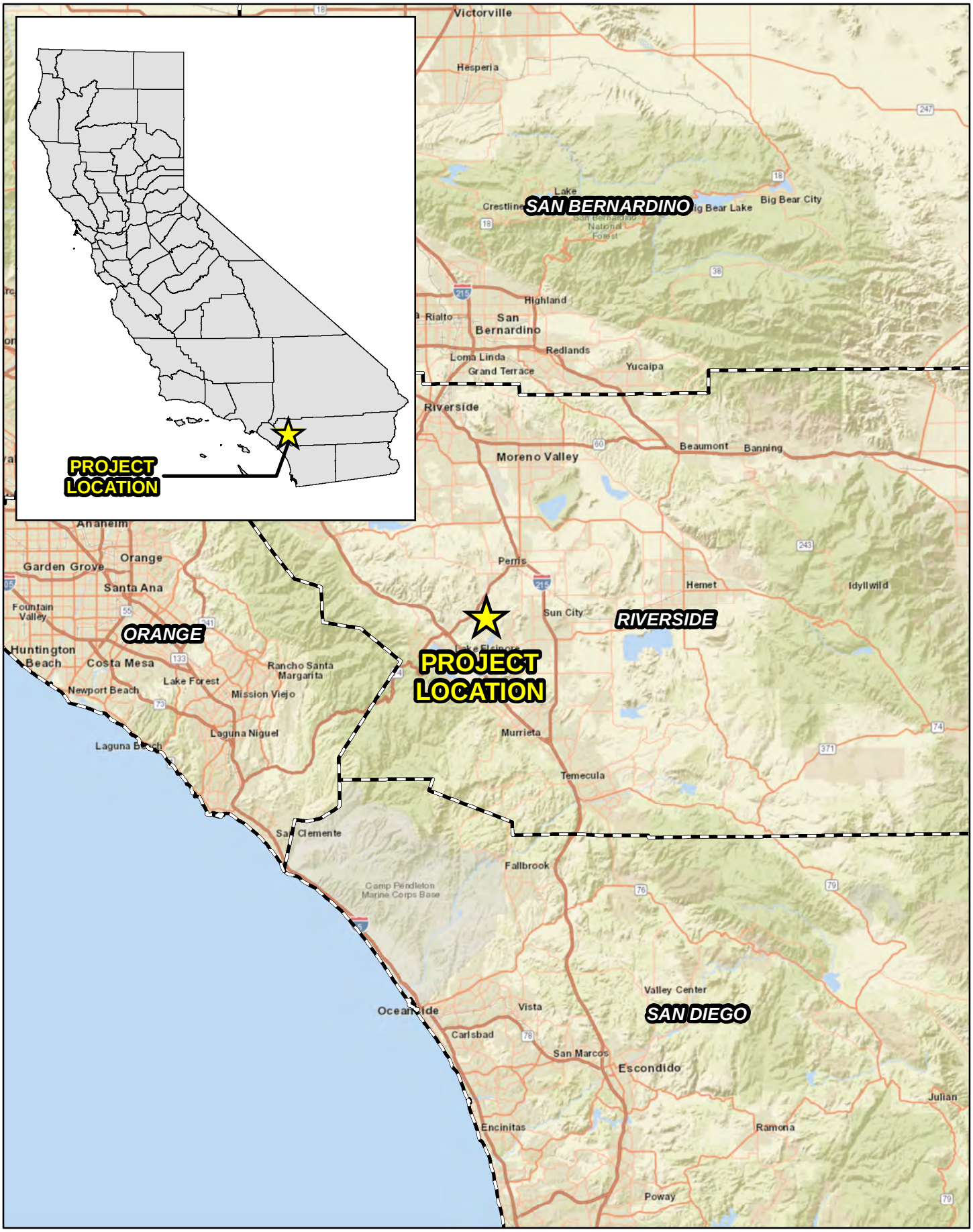
The project proposes to construct a cemetery and related support facilities designed for +/- 20,000 gravesites located in the unincorporated area of Riverside County in the community of Meadowbrook, north of Lake Elsinore (Exhibit 4: *Project Open Space Plan*). The cemetery would be developed over approximately 15 years. Facilities include the following:

- Mortuary - approximately 5,500 square feet (sf) with around 43 of 137 parking spaces (1,300 sf for assembly area). The intent of the mortuary is for burial preparations and small family-oriented gatherings as needed. It will provide offices to support making funeral and burial arrangements, including religious services ancillary to the mortuary, with family attendance.

- Chapel – approximately 9,700 sf with 2,400 sf of assembly area. Parking for each land use is planned to be shared on both sides of the main entry. 77 parking spaces for the chapel of the 152 parking spaces. Total parking provided for this campus area is 137 parking spaces.

- Equipment Shed –approximately 1,400 sf.

Caretaker Residence. A caretaker residence, approximately 2,200 sf, is planned. It may be a modular design with its own septic tank. It is located near the main chapel area where the site manager can monitor and service the cemetery.



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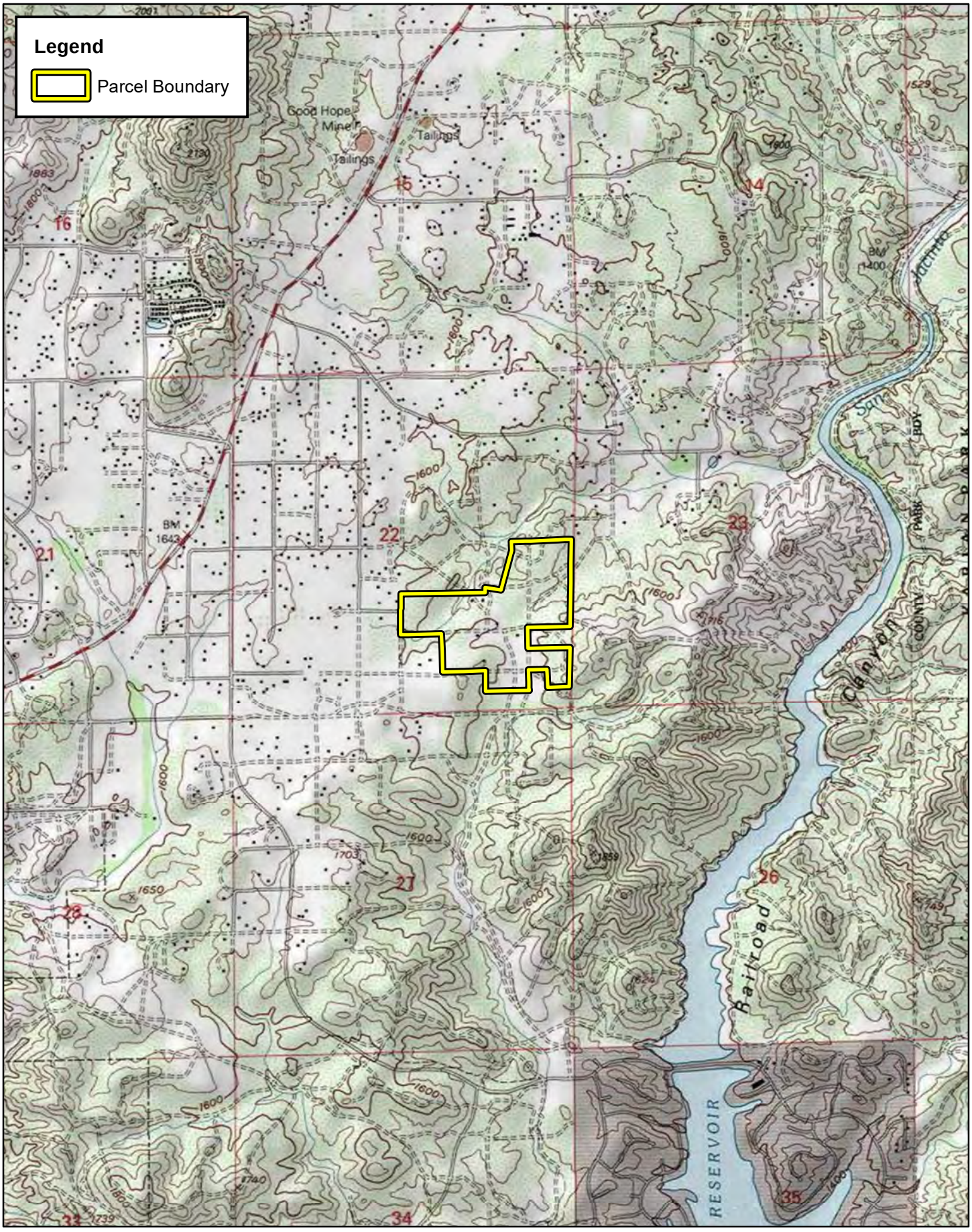
0 5 10 20 Miles

Source: World Street Map, Riverside County

CRESCENT CEMETERY

Regional Vicinity

Exhibit 1



ELMT CONSULTING

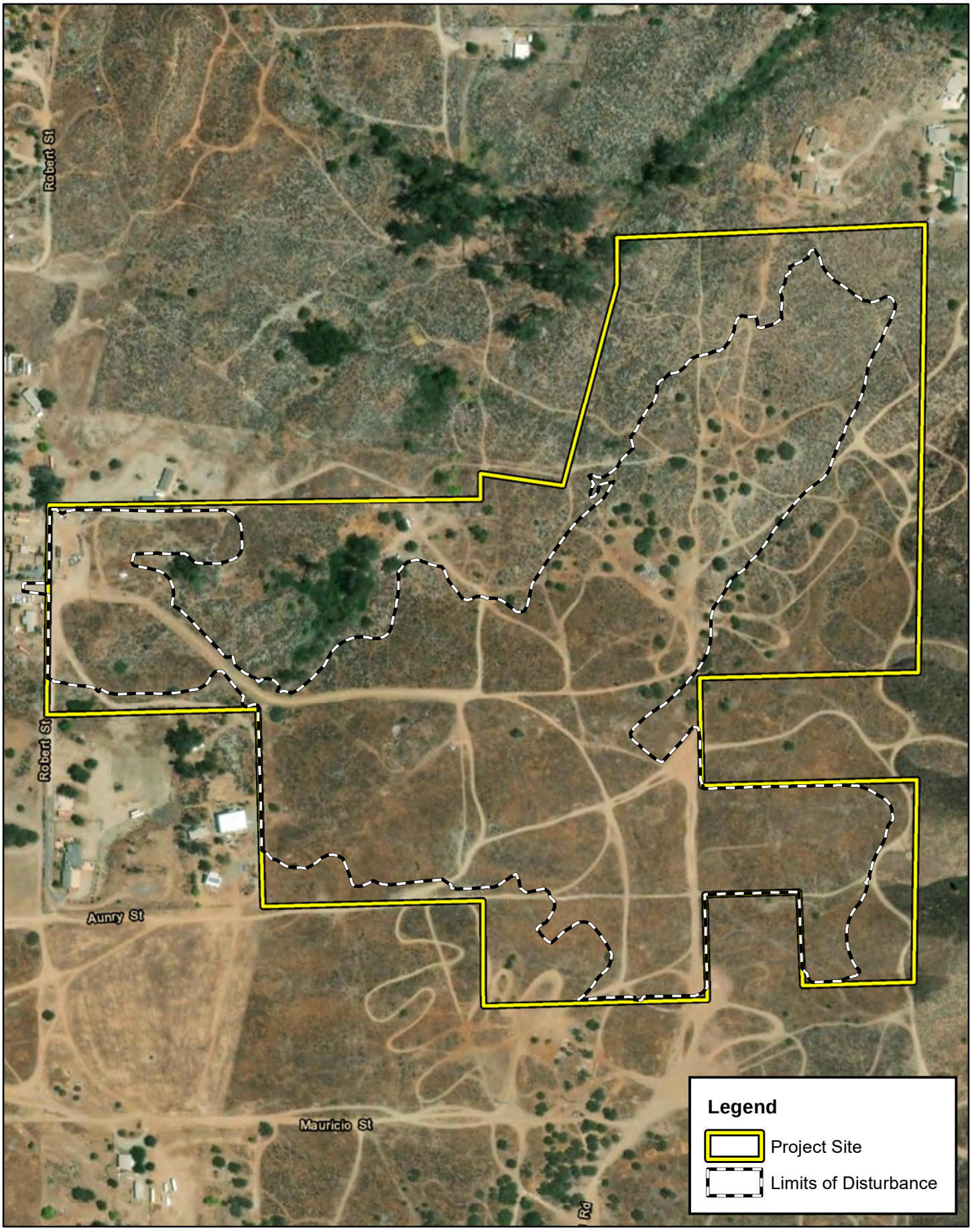
0 1,000 2,000 4,000 Feet

Source: USA Topographic Map, Riverside County

CRESCENT CEMETERY

Site Vicinity

Exhibit 2



ELMT CONSULTING

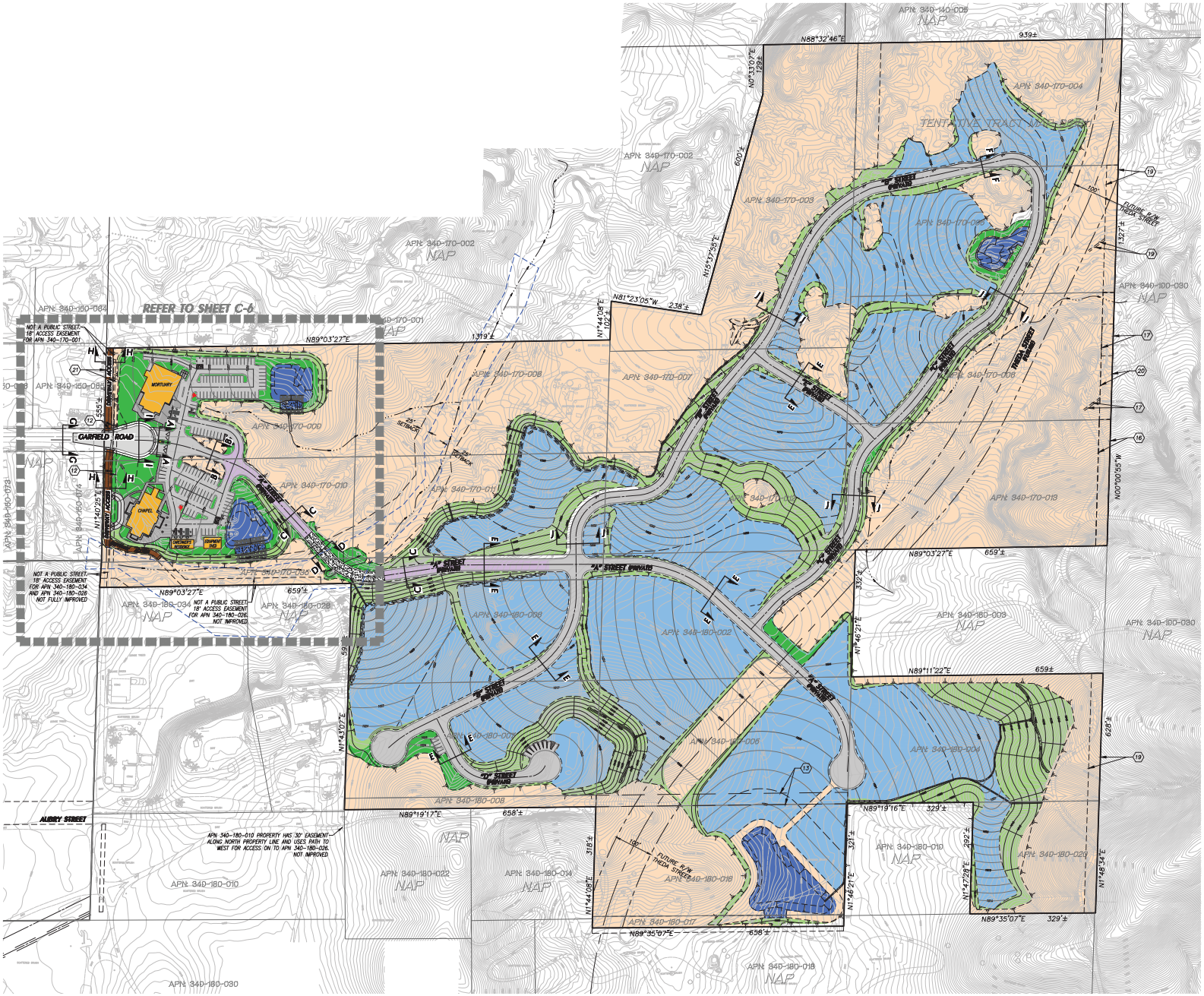
0 125 250 500 Feet

Source: ESRI Aerial Imagery, Riverside County

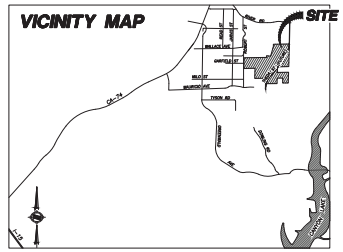
CRESCENT CEMETERY

Project Site

Exhibit 3



VICINITY MAP



NOTES

1. REFER TO ENCUMBRANCE EXHIBIT, SHEETS C-2 AND C-3, FOR EASEMENT LOCATIONS.
2. REFER TO SHEET C-6 FOR STREET CROSS SECTIONS.
3. FOR GENERAL NOTES REFER TO SHEET C-1.

LEGEND

- PROJECT BOUNDARY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED LOT LINE
- PROPOSED CURB
- EXISTING LOT LINE
- PROPOSED EASEMENT LINE
- PROPOSED CENTERLINE
- FENCE
- DAYLIGHT
- EXISTING WATER
- PROPOSED STORM DRAIN
- FLOOD PLAIN LIMITS (PER PRELIMINARY HYDROLOGY)
- JD STREAM BASED ON VCS ENVIRONMENTAL FIELD SURVEY
- WALL
- TOP OF SLOPE
- TOE OF SLOPE
- FIRE HYDRANT
- FIRE LANE (24' WIDTH)
- LANDSCAPE SLOPES 1:1 TO 4:1
- LANDSCAPE AREA
- OPEN SPACE AREA
- WATER QUALITY AND DETENTION BASINS
- BUILDING FOOTPRINT
- PERMEABLE PAVEMENT
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- AGGREGATE BASE

Project Area: 84.99 Acres	
Open Space Summary	**Acres**
Grave Site	24.5
Natural Open Space	37.4
Slopes 1:1 to 4:1	9.3
Landscape Areas	1.9
Total	**73.0**
Detention Basins	**1.5 Acres**

* REFER TO PHASING PLAN

FEET 0 50 100 200
INCHES 0 1/2 1 2

APPLICANT:
MUSLIM MORTUARY & CEMETERY COMMITTEE
13121 BROOKHURST STREET, SUITE C
GARDEN GROVE, CA 92843
TEL: (310)-619-0082

PREPARED BY:
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CRESCENT GARDENS CEMETERY, COUNTY OF RIVERSIDE

CONDITIONAL USE PERMIT - CUP230002

SITE PLAN - OVERALL

REVISION	
DATE	DESCRIPTION

DESIGNED BY: ____
DRAFTED BY: P.R.
CHECKED BY: ____
DATE: 11/29/23
CITY FILE NO.:
SHEET C-5
W.O. 4427-2

DATE: Nov. 29, 2023 10:41:37 AM FILE: F:\1167\Planning\SA_CUP 230003\Exh_CUP\C05_SiteOverall_CUP 230002.dwg

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 ensure 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 Sate 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 August 22, 2023. 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.*"3F3F[4] 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 Sates" 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. In addition, refer to Section 8 for a complete list of references used throughout the course of this delineation.

4.1 WATERSHED REVIEW

The project site is located within the Perris hydrologic area in the Lower San Jacinto River Watershed, which is a subset of the larger San Jacinto River Watershed (HUS 18070202). The San Jacinto flows approximately 0.64 miles east of the project site. The San Jacinto River conveys flows south in to Canyon Lake, then further southwest where it terminates at Lake Elsinore.

The Lower San Jacinto Watershed encompasses approximately 765 square miles in western Riverside County. This watershed is bounded by several mountain ranges, including the Badlands Mountain Range to the north, San Jacinto Mountains to the east, the Santa Ana Mountains to the west, and the Santa Margarita Mountains to the south. Currently, this watershed is primarily undeveloped. With natural open spaces at the headwaters areas and mostly agricultural and urban development in the middle and downstream areas.

The San Jacinto River Watershed consists of a single major drainage, the San Jacinto River, which is comprised of several smaller tributaries. The San Jacinto River begins in the San Jacinto Mountains and veers northwest to follow the lower elevations of the San Jacinto Valley. The mainstem begins at the confluence of South Fork San Jacinto River and North Fork San Jacinto River. The San Jacinto River is approximately 42 miles long, supports the majority of existing agricultural land in the San Jacinto Valley, and discharges into Canyon Lake, the overflow from which discharges into Lake Elsinore, which qualifies as a traditional navigable water (TNW). Discharges from Lake Elsinore drain into Walker Canyon, which is a tributary to Temescal Wash, and Temescal Wash is a tributary to the Santa Ana River, which ultimately conveys flows to the Pacific Ocean, a TNW.

4.2 LOCAL CLIMATE

The City of Perris 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 chilly to cold morning temperatures with frost common. Climatological data obtained for the City of Riverside indicates the annual precipitation averages 11.11 inches per year. Almost all of the precipitation in the form of rain occurs in the months between December and April, with hardly any occurring between the months of May and September. The wettest months are January and February, with monthly average totals precipitation of 2.24 and 3.29 inches, respectively, and the driest months are June and July, both with monthly average total precipitation of 0.04 inches. The average maximum and minimum temperatures are 86- and 46-degrees Fahrenheit (°F), respectively, with July and August (monthly average high 100°F) being the hottest months and December and January (monthly average lows 34 and 35°F) being the coldest. The temperature during the site visit was in the low-70s°F with overcast skies and calm winds.

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 a project site.

The proposed project site is depicted on the Lake Elsinore quadrangle of the United States Geological Survey's (USGS) 7.5-minute topographic map series within Sections 18 and 19 of Township 4 South, Range 3 West. The project site ranges in elevation from 1,540 to 1,670 feet above mean sea level and slopes generally from south to north. On-site topography is variable with topographic relief present along the eastern boundaries. Depressions within the site occur in association with access roads, and ponding which has occurred in recent years as a result of well installation and well water extraction.

4.4 AERIAL PHOTOGRAPH

Prior to conducting the field delineation, ELMT reviewed current and historical aerial photographs (1985-2023) of the project as available from Google Earth Pro Imaging. 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 project site occurs in an area formerly dominated by agricultural land uses that has been becoming urbanized in recent decades. Present land uses in the vicinity include tract neighborhoods, anchor retail centers, and assorted commercial, industrial, and institutional developments, with scattered undeveloped parcels supporting former agricultural land. The site is bounded to the north by Val Verde Elementary School and undeveloped, vacant land; to the northeast, east, and south by commercial and industrial developments with tract neighborhoods beyond; and to the west by Interstate 215.

The project site primarily supports undeveloped land with some developed areas. The entirety of the site has been subject to several decades of anthropogenic disturbances associated with historic agricultural land uses, grading activities, flood control infrastructure, weed abatement, and other on-site and surrounding development. Historic aerials show these activities have been ongoing since at least 1959. A more detailed historical timeline is provided below:

1967 - 1978: The project site and surrounding areas support primarily undeveloped, vacant land. Disturbances onsite include unpaved roadways. Scattered residential development occurs to the north and west. Robert Street is present to the west.

1978 - 1985: Additional residential development is present to the west, south, and southeast of the project site. Increased disturbance within the project site includes additional unpaved roadways. State Route 74 is constructed to the northwest.

1985 - 1994: Residential development continues to expand to the west and north of the project site. Bee boxes are installed in the northwest region of the site.

1994 - 2006: Minor development occurs within the boundaries of the project site concentrated in the northwest region. This development appears to be preliminary and is restricted to concrete footings for several small structures.

2006 - 2009: A well is installed in the northwest corner of the project site, near the northern boundary.

2009 - 2018: Minor disturbances continue onsite in association with the expansion of unpaved roadways, and intermittent stockpiling.

2018 - 2019: Onsite stockpiling increases. Storage containers are present near the northern boundary. Crops are visible to the southwest of the well.

2019 - 2021: More crops are visible to the west, north, east, and south southeast of the well.

2021 - Present: Trees have been cleared near the well and surrounding areas. Crops are no longer present.

4.5 SOILS

On-site and adjoining soils were researched prior to the field visits using the U.S. Department of Agriculture National Resources Conservation Service and Soil Survey for Western Riverside Area, California. 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 Cieneba rocky sandy loam (8 to 15 percent slopes, eroded), Cieneba rocky sandy loam (15 to 50 percent slopes, eroded), Lodo rocky loam (8 to 25 percent slopes, eroded), Lodo rocky loam (25 to 50 percent slopes, eroded), Vallecitos loam (thick solum variant, 8 to 15 percent slopes, eroded), and Vista coarse sandy loam (8 to 15 percent slopes, eroded). Refer to Exhibit 4, *Soils*. Soils underlying the site are generally undisturbed with the exception of a network of access roads and recreational trails, areas surrounding remnant structures, and several areas on the western periphery of the site that have been utilized for storage and staging activities and road access for adjacent development.

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 hydric[5]. 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, none of the soils mapped as occurring within the project site are listed as hydric in Western Riverside County.

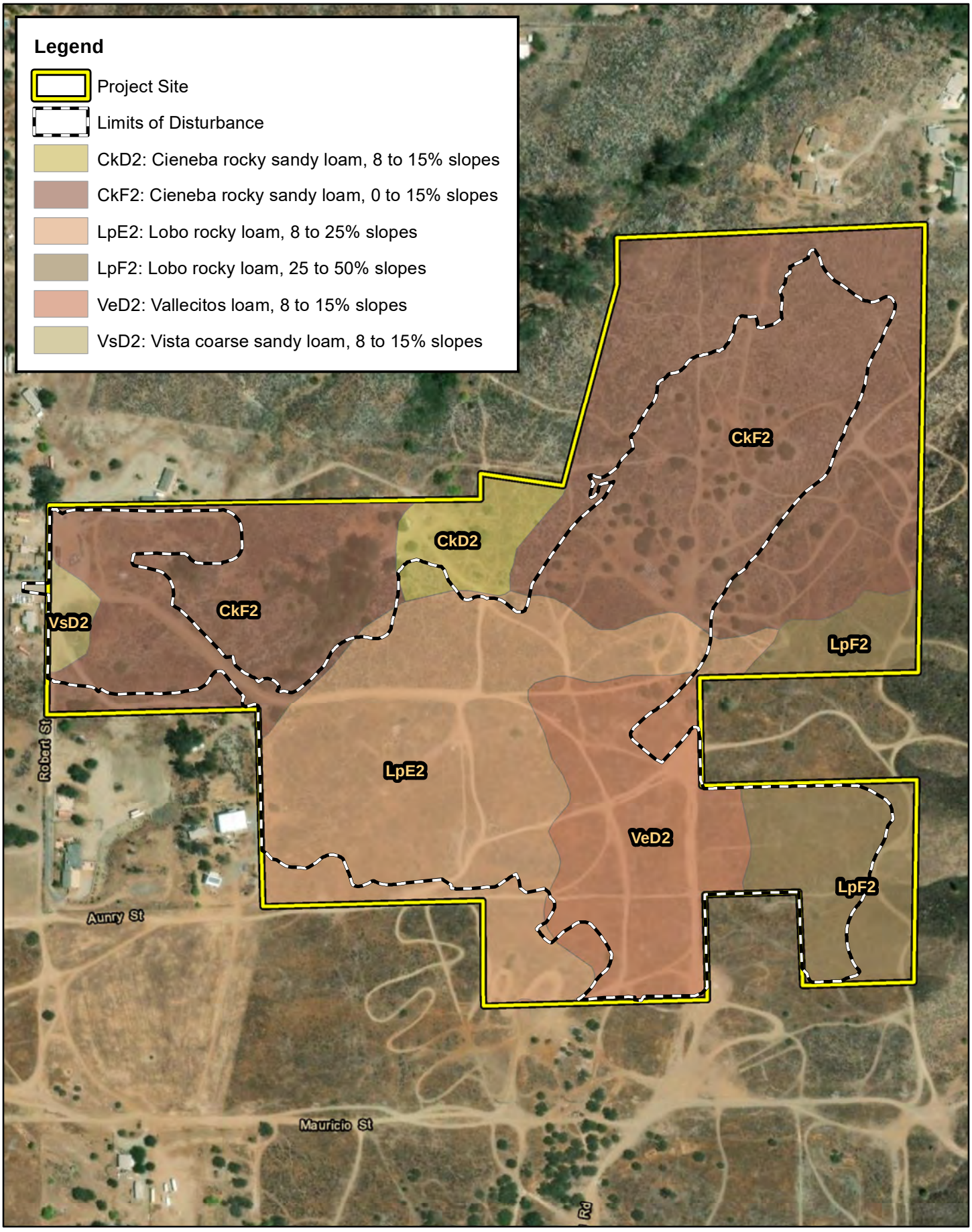
[5] A hydric soil is a soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part.

4.7 NATIONAL WETLANDS INVENTORY

The USFWS NWI and the USGS National Hydrography Dataset were reviewed to determine if any blueline streams or riverine resources have been documented within or immediate surrounding the project site. Based on this review, one riverine feature is mapped as occurring within the boundaries of the project site. This feature is classified as an intermittent streambed by the NWI. Drainage 1 observed within the project site, correspond to the mapped blueline stream. Refer to Appendix B, *Documentation*.

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 Nos. 06065C2033G and -034G, the project site is located within Zone X – area of minimal flood hazard.



ELMT CONSULTING

0 125 250 500 Feet

Source: ESRI Aerial Imagery, Soil Survey Geographic Database, Riverside County

CRESCENT CEMETERY

Soils

Exhibit 5

Section 5 Site Conditions

ELMT biologists Travis J. McGill, Jacob H. Lloyd Davies, and Rachael A. Lyons conducted a field delineation on November 13 and 16, 2023, 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. Refer to Appendix C for representative photographs taken throughout the project site.

5.1 JURISDICTIONAL FEATURES

5.1.1 DRAINAGE FEATURES

ELMT carefully assessed the site for depressions, inundation, presence of hydrophytic vegetation, staining, cracked soil, ponding, and indicators of active surface flow and corresponding 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. Suspected jurisdictional areas were checked for the presence of definable channels, soils, and hydrology. One (1) unnamed drainage (Drainage 1) was documented within the project site during the time of the investigation.

Drainage 1

One (1) unnamed drainage feature (Drainage 1) was observed within the boundaries of the project site at the time of the investigation. Drainage 1 extends from south to north within the northwest region of the project site. Drainage 1 conveys flows, primarily outside of the proposed limits of disturbance before terminating near the northwest corner of the site. Drainage 1 receives flows direct precipitation upstream and from the discharge waters of a well in the middle of the drainage, outside the proposed limits of disturbance, which was installed to provide water to onsite agricultural activities. The upstream portion of Drainage 1 appears to only support surface water immediately following storm events. Portions of Drainage 1 support a mixed riparian scrub plant community.

Evidence of an OHWM was observed via scour, changes in substrate, shelving, and lack of vegetation. The OWHM ranged from 3 to 6 feet in width throughout the length of the drainage within site boundaries.

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. No riparian vegetation or wetland obligate plant species were observed within the drainage described above. Drainage 1 conveys flows during and following storm events and does not hold water for long enough to create anaerobic conditions or form hydric soils. Therefore, Drainage 1 does not meet wetland requirements.

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).

6.1.2 WETLAND DETERMINATION

An area must exhibit all three wetland parameters described in the Corps Arid West Regional Supplement to be considered a jurisdictional wetland. Based on the results of the field delineation, it was determined that no areas within the Project site met all three wetland parameters. Therefore, no jurisdictional wetland features exist within the Project site.

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 0.13 acre (1,360 linear feet) of Regional Board jurisdiction is located within the boundaries of the project site. Based on the proposed project footprint, approximately 0.007 acre (96 linear feet) of Regional Board waters of the State will be impacted from project implementation. Refer to Table 1 for a summary of on-site jurisdictional areas, and Exhibit 5, *Jurisdictional Areas*, for an illustration of on-site Regional Board jurisdictional areas and anticipated impacts.

Table 1: Regional Board Jurisdictional Waters

Jurisdictional Feature	Regional Board Jurisdiction	
	On-Site Jurisdiction Acreage (Linear Feet)	**Jurisdictional Impacts** Acreage (Linear Feet)
Drainage 1	0.13 (1,360)	0.007 (96)
TOTAL	**0.13 (1,360)**	**0.007 (96)**

6.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

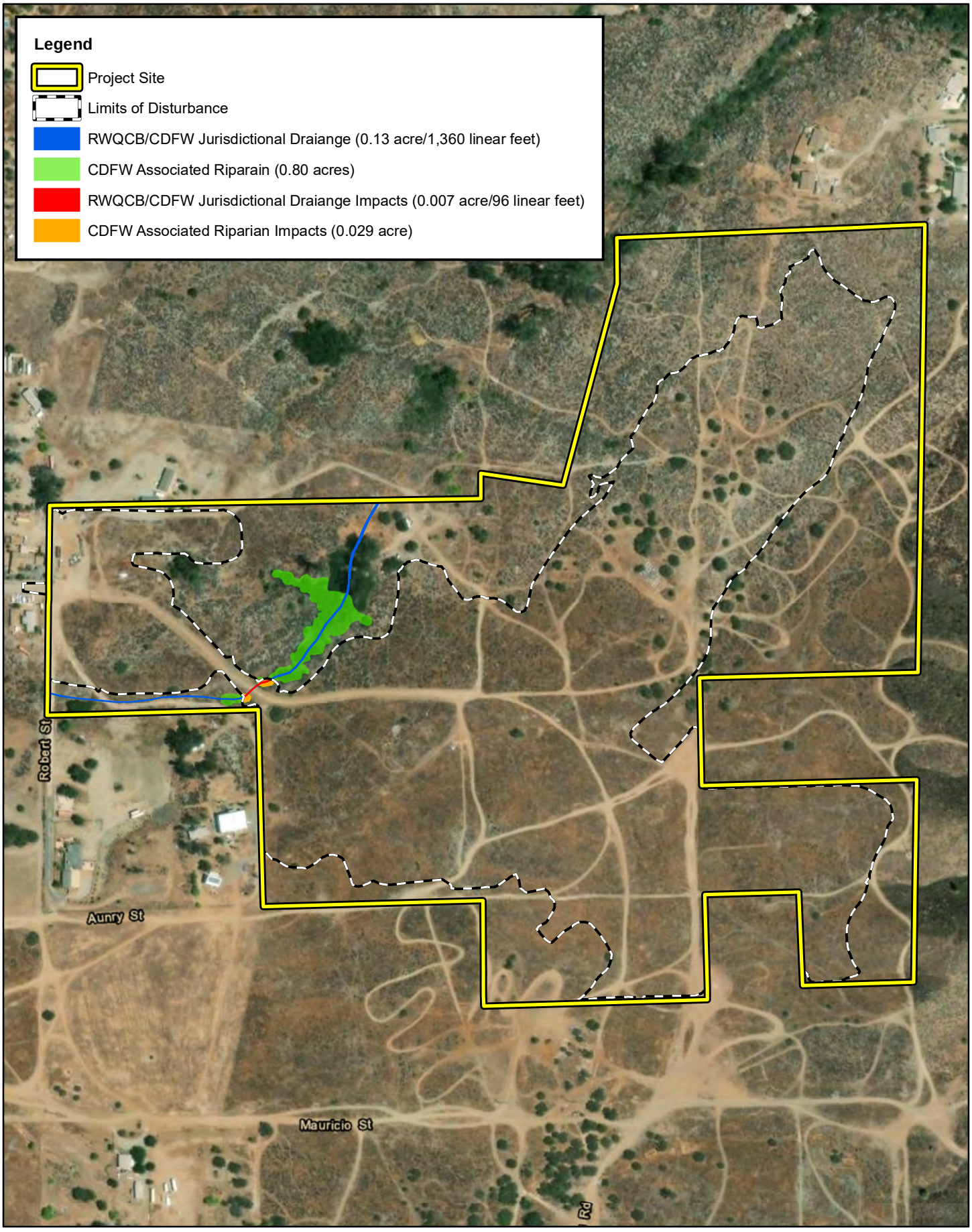
Drainages 1 exhibits characteristics consistent with CDFW's methodology and would likely be considered CDFW streambed/riparian. Approximately 0.96 acre (1,360 linear feet) of CDFW jurisdictional areas, consisting of 0.13 acre of jurisdictional streambed, and 0.80 acre of associated riparian vegetation occur

within boundaries of the project site. CDFW jurisdiction within Drainage 1 extends beyond the OHWM or streambed to the outer canopy of the riparian vegetation (mixed riparian scrub).

Based on the proposed project footprint, approximately 0.036 acre (96 linear feet) of CDFW jurisdictional streambed/riparian habitat will be impacted from project implementation. Refer to Table 2 for a summary of on-site jurisdictional areas, and Exhibit 5, for an illustration of on-site CDFW jurisdictional areas and anticipated impacts.

Table 2: CDFW Jurisdictional Waters

Jurisdictional Feature	**CDFW Jurisdiction**	
	On-Site Jurisdiction Acreage (Linear Feet)	**Jurisdictional Impacts** Acreage (Linear Feet)
Drainage 1	0.93 (1,360)	0.036 (96)
TOTAL	**0.96 (1,360)**	**0.036 (96)**



ELMT CONSULTING

0 125 250 500 Feet

Source: ESRI Aerial Imagery, Riverside County

CRESCENT CEMETERY

Jurisdictional Areas

Exhibit 5

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

It is recommended that this delineation be forwarded to the regulatory agencies for their review and concurrence. The concurrence/receipt would solidify findings noted within this report.

Section 8 References

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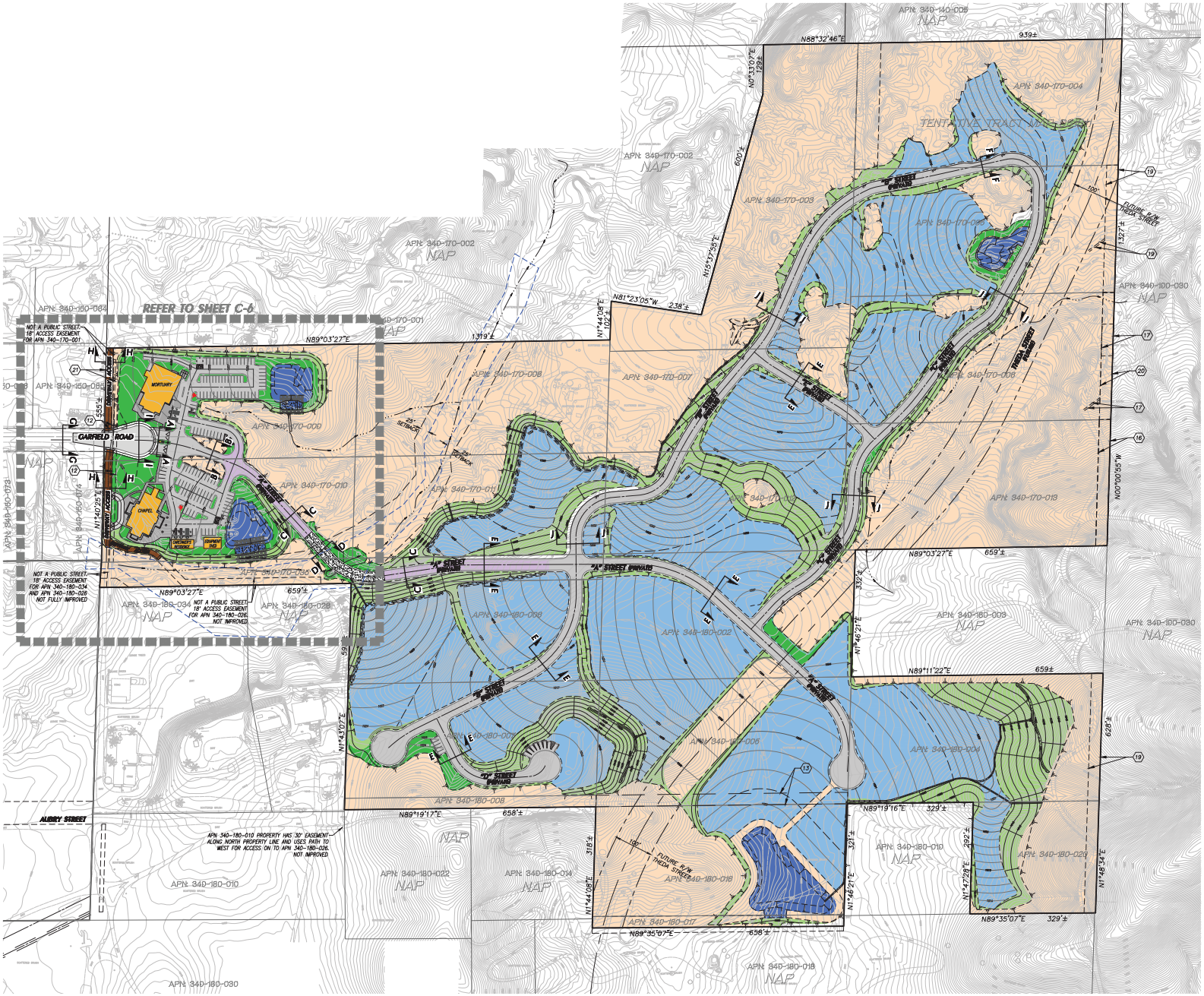
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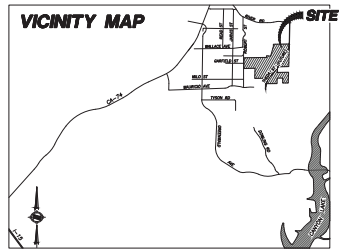
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Appendix A Site Plan



VICINITY MAP



NOTES

1. REFER TO ENCUMBRANCE EXHIBIT, SHEETS C-2 AND C-3, FOR EASEMENT LOCATIONS.
2. REFER TO SHEET C-6 FOR STREET CROSS SECTIONS.
3. FOR GENERAL NOTES REFER TO SHEET C-1.

LEGEND

- PROJECT BOUNDARY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED LOT LINE
- PROPOSED CURB
- EXISTING LOT LINE
- PROPOSED EASEMENT LINE
- PROPOSED CENTERLINE
- FENCE
- DAYLIGHT
- EXISTING WATER
- PROPOSED STORM DRAIN
- FLOOD PLAIN LIMITS (PER PRELIMINARY HYDROLOGY)
- JD STREAM BASED ON VCS ENVIRONMENTAL FIELD SURVEY
- WALL
- TOP OF SLOPE
- TOE OF SLOPE
- FIRE HYDRANT
- FIRE LANE (24' WIDTH)
- LANDSCAPE SLOPES 1:1 TO 4:1
- LANDSCAPE AREA
- OPEN SPACE AREA
- WATER QUALITY AND DETENTION BASINS
- BUILDING FOOTPRINT
- PERMEABLE PAVEMENT
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- AGGREGATE BASE

Project Area: 84.99 Acres	
Open Space Summary	**Acres**
Grave Site	24.5
Natural Open Space	37.4
Slopes 1:1 to 4:1	9.3
Landscape Areas	1.9
Total	**73.0**
Detention Basins	**1.5 Acres**

* REFER TO PHASING PLAN

FEET 0 50 100 200
INCHES 0 1/2 1 2

APPLICANT:
MUSLIM MORTUARY & CEMETERY COMMITTEE
13121 BROOKHURST STREET, SUITE C
GARDEN GROVE, CA 92843
TEL: (310)-619-0082

PREPARED BY:
HUNSAKER & ASSOCIATES IRVINE, INC.
PLANNING • ENGINEERING • SURVEYING
Temecula • Indio, CA (760) 200-0020 • Irvine (949) 583-1010

CRESCENT GARDENS CEMETERY, COUNTY OF RIVERSIDE

CONDITIONAL USE PERMIT - CUP230002

SITE PLAN - OVERALL

REVISION	
DATE	DESCRIPTION

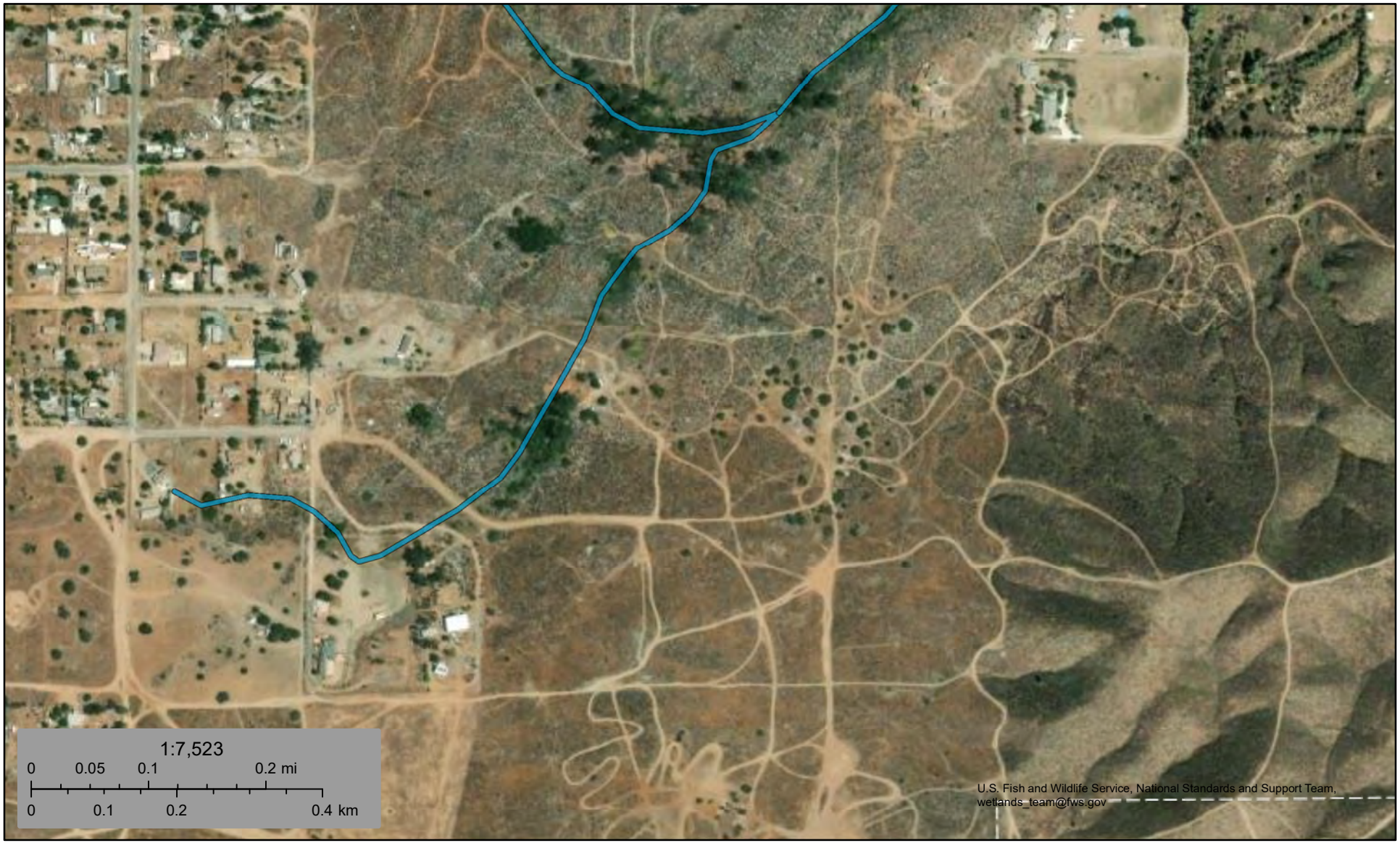
DESIGNED BY: ____
DRAFTED BY: P.R.
CHECKED BY: ____
DATE: 11/29/23
CITY FILE NO.:
SHEET C-5
W.O. 4427-2

DATE: Nov. 29, 2023 10:41:37 AM FILE: F:\1167\Planning\SA_CUP 230003\Exh_CUP\C05_SiteOverall_CUP 230002.dwg

Appendix B Documentation

U.S. Fish and Wildlife Service
National Wetlands Inventory

Crescent Cemetery



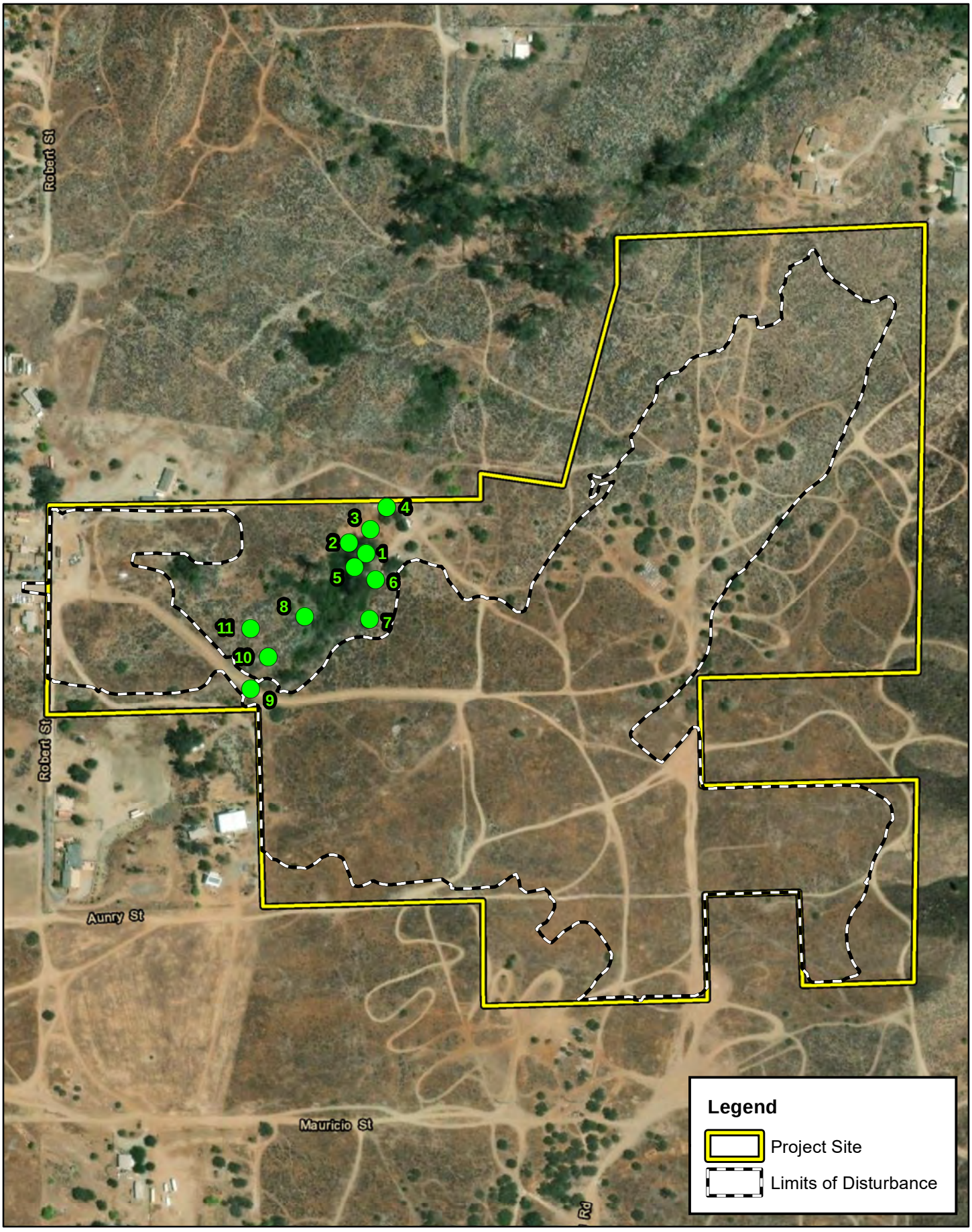
February 22, 2024

Wetlands

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

Appendix C Site Photographs



ELMT CONSULTING

0 125 250 500 Feet

Source: ESRI Aerial Imagery, Riverside County

CRESCENT CEMETERY

Photo Index

Exhibit 1



Photograph 1: View of a well observed within the project site.



Photograph 2: View at the start of Drainage 1 at the base of the well, looking northwest.



Photograph 3: From middle of Drainage 1 looking north through existing debris and vegetation, outside of the limits of disturbance.



Photograph 4: From the middle of Drainage 1, looking northeast at the point of termination outside of the limits of disturbance.



Photograph 5: View of the standing water within the mixed riparian scrub plant community that was created from damming of the drainage and irrigation.



Photograph 6: Depicting a second well found within the ponded area within the project site.



Photograph 7: From the northwest portion of the mixed riparian plant community, looking southeast through associated vegetation.



Photograph 8: From the southwest portion of the mixed riparian plant community, looking northeast through associated vegetation.



Photograph 9: Looking east along the dirt access road that crosses the onsite drainage feature.



Photograph 10: View of the southern end of the onsite drainage feature, north of the dirt road.



Photograph 11: From the dirt road looking north at the southern portion of the onsite drainage feature.

Appendix D Methodology

WATERS OF THE UNITED STATES

Section 404 of the Clean Water Act

In accordance with the Revised Definition of "Waters of the United States"; Conforming (September 8, 2023), "waters of the United Sates" 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
(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.

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.

[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.

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;
- *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.
- No Indicator (*NI):* Plant not listed on the Corps Wetland Plant List for the Arid West.

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 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.

[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.

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.