

**MSHCP CONSISTENCY ANALYSIS AND
HABITAT ASSESSMENT**

**WILDOMAR 11-ACRE PROJECT
CITY OF WILDOMAR
RIVERSIDE COUNTY, CALIFORNIA**

LSA

March 2016

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HABITAT ASSESSMENT**

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CITY OF WILDOMAR
RIVERSIDE COUNTY, CALIFORNIA**

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Project No. MMI1501

LSA

March 2016

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1.0 INTRODUCTION

LSA has conducted a Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) consistency analysis and jurisdictional delineation for the approximately 11-acre project site located in the City of Wildomar, Riverside County, California.

2.0 PROJECT LOCATION AND DESCRIPTION

This report, prepared for Assessor's Parcel Numbers (APNs) 362-250-001 and 362-250-026, serves to document the results of an MSHCP consistency analysis conducted by LSA on the property, which is located just east of the intersection of Depasqualle Road and George Avenue, and west of Iodine Springs Road, in the City of Wildomar. The property is located within Section 3, Township 6 South, Range 3 West, as shown on the United States Geological Survey (USGS) *Murrieta, California 7.5-minute quadrangle* (Figure 1).

The project site plan proposes the development of 76 single-family homes on an approximately 11.7-acre site. As this plan illustrates, direct access to the proposed development site will be via access roads from George Avenue and Iodine Springs Road. Figure 2 illustrates the project's site plan.

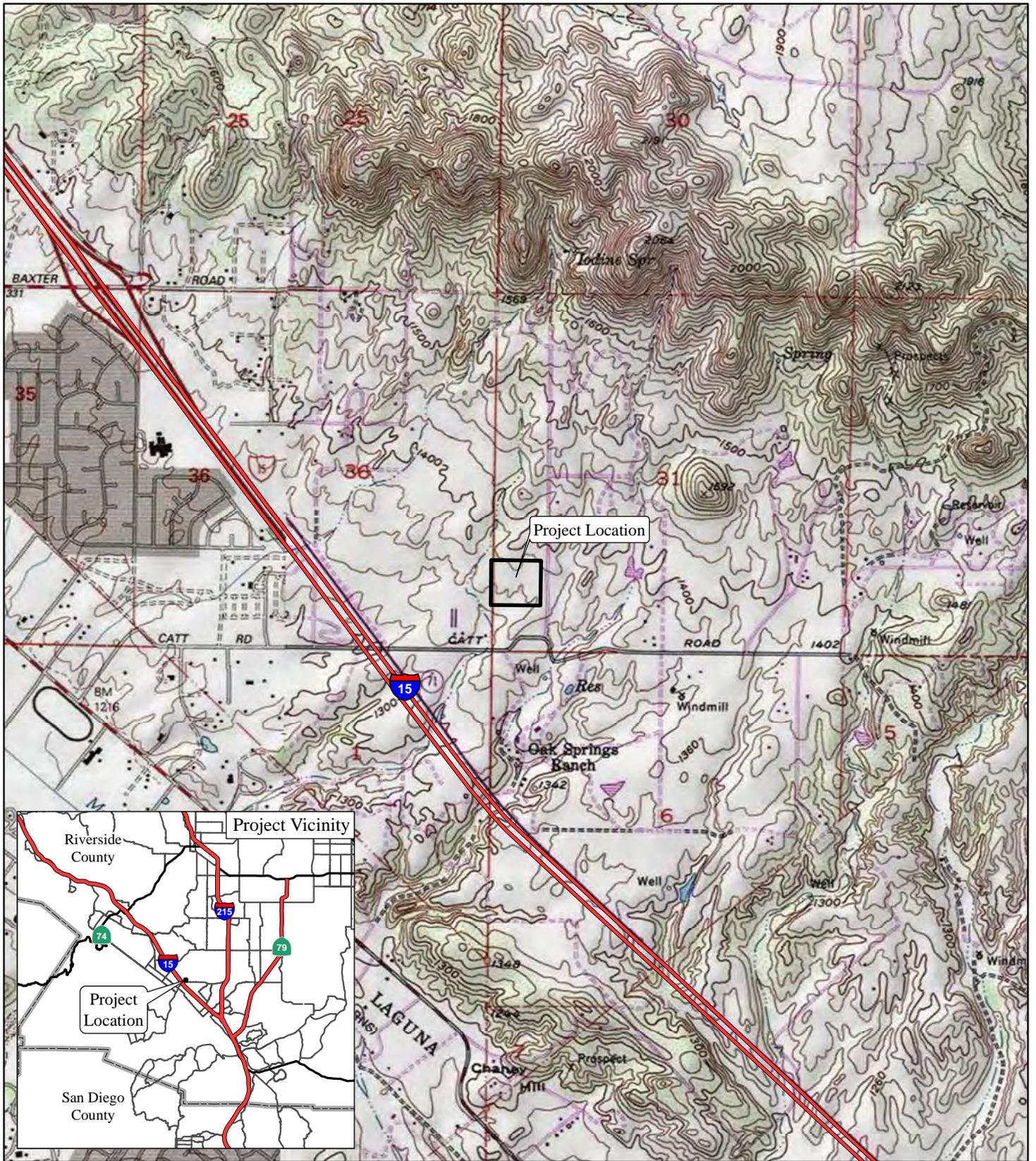
3.0 BACKGROUND

3.1 Western Riverside County Multiple Species Habitat Conservation Plan

The MSHCP provides for the assembly of a Conservation Area consisting of Core Areas and Linkages for the conservation of Covered Species (Riverside County 2003). Covered Species are 146 species of plants and animals of various Federal and State listing statuses. The Conservation Area is to be assembled from portions of the MSHCP Criteria Area, which consists of quarter-section (i.e., 160-acre) Criteria Cells, each with specific criteria for species conservation within that cell. The MSHCP provides an incentive-based program, the Habitat Evaluation and Acquisition Negotiation Strategy (HANS), for adding land to the MSHCP Conservation Area. If it is determined that all or a portion of the property is needed for inclusion in the MSHCP Conservation Area, then various incentives may be available to the property owner in exchange for the conveyance of a property interest.

The MSHCP requires focused surveys for certain plant and animal species for project sites located within designated plant and animal survey areas when potential suitable habitat is present. For instance, surveys for Delhi Sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*) may be required in areas having Delhi soils. The MSHCP also requires that an assessment be completed to determine the effects of the project on riparian/riverine areas and vernal pools, and associated protected species in accordance with MSHCP Section 6.1.2, Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools.

Projects located in proximity to an MSHCP Conservation Area may result in edge effects that could adversely affect biological resources within the MSHCP Conservation Area. These edge effects must be addressed according to the Urban/Wildlands Interface Guidelines (MSHCP Section 6.1.4).



LSA

LEGEND

 Project Location

FIGURE 1



0 1000 2000
FEET

SOURCE: USGS 7.5' Quad - Murrieta (1979), CA

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Wildomar 11 Acre Project
Project Location and Vicinity



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FIGURE 2

Wildomar 11-Acre Project
Site Plan

SOURCE: Nova Homes, 2014

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3.2 Jurisdictional Waters and Streambeds

The United States Army Corps of Engineers (USACE), under Section 404 of the Federal Clean Water Act (CWA), regulates discharges of dredged or fill material into “waters of the United States.” These waters include wetlands and non-wetland bodies of water that meet specific criteria, including a connection to interstate or foreign commerce. This connection may be direct (through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce) or indirect (through a connection identified in USACE regulations). The USACE typically regulates as non-wetland waters of the U.S. any body of water displaying an “ordinary high water mark” (OHWM). In order to be considered a jurisdictional wetland under Section 404, an area must possess hydrophytic vegetation, hydric soils, and wetland hydrology.

The CDFW, under Sections 1600 et seq. of the California Fish and Game Code, regulates alterations to lakes, rivers, and streams. A stream is defined by the presence of a channel bed and banks, and at least an occasional flow of water. The CDFW also regulates habitat associated with the streambed, such as wetland, riparian shrub, and woodland habitat.

The Regional Water Quality Control Board (RWQCB) is responsible for the administration of Section 401 of the CWA, through water quality certification of any activity that may result in a discharge to jurisdictional waters of the United States. The RWQCB may also regulate discharges to “waters of the State,” including wetlands, under the California Porter-Cologne Water Quality Control Act (Porter-Cologne Act).

3.3 Migratory/Nesting Birds

The burrowing owl (*Athene cunicularia*) and other nesting bird species are protected by California Fish and Game Code Sections 3503 and 3503.5 and by the Migratory Bird Treaty Act (MBTA) of 1918 (16 United States Code [USC] 703–711), which make it unlawful to take, possess, or needlessly destroy the nest or eggs of any migratory bird or bird of prey.

4.0 METHODS

4.1 Literature Review

A literature review was conducted to determine the existence or potential occurrence of special-status plant and animal species on the project site and in the project vicinity. Database records for the *Murrieta, California* USGS 7.5-minute series quadrangle and surrounding quadrangles were searched on July 27, 2015, using the CDFW California Natural Diversity Data Base *Rarefind 5* online application (<https://map.dfg.ca.gov/rarefind/>) and the California Native Plant Society’s *Inventory of Rare and Endangered Plants* (<http://www.cnps.org/inventory>). The Riverside County Integrated Project (RCIP) Conservation Summary Report (http://onlineservices.rctlma.org/content/rcip_report_generator.aspx) and Volume 1 of the MSHCP (Riverside County Transportation and Land Management Agency) were queried to determine habitat assessment and potential survey requirements for the site. Soil information was taken from electronic data provided by the Web Soil Survey (Natural Resource Conservation Service 2013). Current and historical aerial photographs were also reviewed in Google Earth (Google Earth 2015).

4.2 Field Surveys

The field survey included a site visit on July 28, 2015, by LSA Biologists Denise Woodard and Lonnie Rodriguez. Weather conditions were clear and warm, with a recorded starting temperature of 72 degrees Fahrenheit (°F) and an ending temperature of 79 °F. Winds were calm at 1 to 3 miles per hour. Observations regarding general site conditions, vegetation, riparian/riverine and vernal pools, potential jurisdictional waters, and suitability of habitat for plants, wildlife, and other biological resources were recorded. All plant and animal species observed during the field survey were noted.

Riparian/Riverine and Vernal Pools. The site was assessed for the presence of riparian/riverine areas and vernal pools, as defined in Section 6.1.2 of the MSHCP. Areas meeting these definitions were measured and mapped onto an aerial photograph on the field. Mapped areas were later digitized using geographic information system (GIS) software based on the mapped locations of measured widths collected in the field.

Burrowing Owl Habitat Suitability Assessment. The project site is within the MSHCP burrowing owl survey area. A burrowing owl habitat assessment was conducted in accordance with MSHCP accepted guidelines (*Burrowing Owl Survey Instructions for the Western Riverside County Multiple Species Habitat Conservation Plan Area*, Riverside County Environmental Programs Department, March 29, 2006).

Jurisdictional Delineation. The fieldwork for the jurisdictional delineation was conducted on March 10, 2016, by Denise Woodard. Areas of potential jurisdiction were evaluated according to USACE and CDFW criteria. Measurements of potential jurisdictional areas were taken in the field and mapped on an aerial photograph. The limits of jurisdictional areas were digitized using GIS software based on the mapped locations of measured widths collected in the field. The jurisdictional areas were calculated using GIS software to calculate the mapped areas.

5.0 EXISTING SETTING

5.1 Existing and Adjacent Land Use

The project site consist of an 11-acre vegetated site with one prefabricated home located on the northeast section of the property. The project site is bordered by a residential community west of George Avenue and rural residential development east of Iodine Springs Road. Land to the north is being developed for residential housing and the land to the south is undeveloped.

5.2 Topography and Soils

The topography of the project site is dominated by hills that slope gradually to the south and west. The elevations range from 1,340 feet to 1,360 feet above mean sea level. The soils within the property, as shown on Figure 3, include the following:

- Hanford coarse sandy loam, 2 to 8 percent slopes;

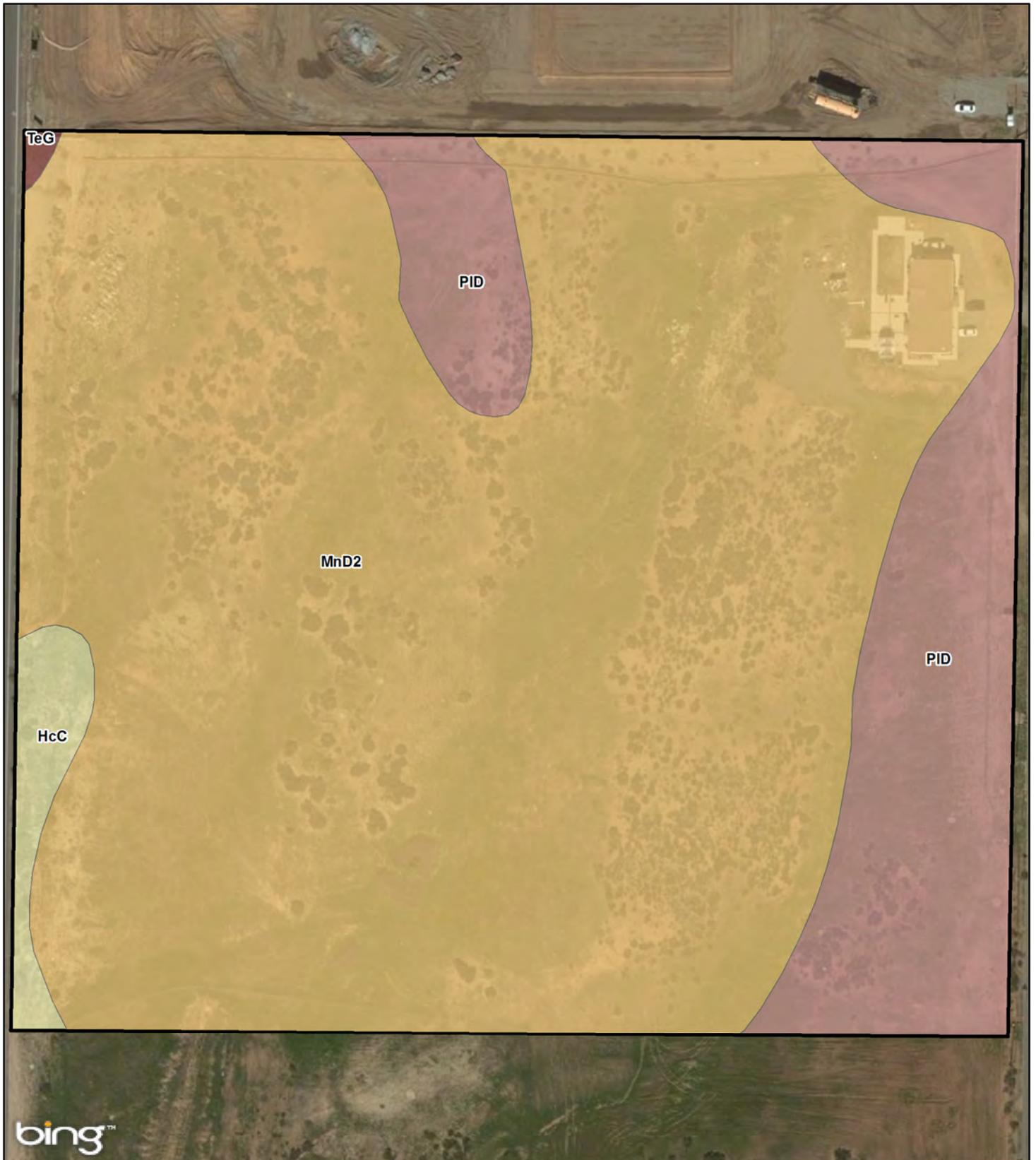


FIGURE 3

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LEGEND

 Project Location

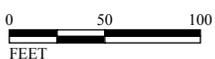
Soils

 HcC - Hanford coarse sandy loam, 2 to 8 percent slopes

 MnD2 - Monserate sandy loam, shallow, 5 to 15 percent slopes, eroded

 PID - Placentia fine sandy loam, 5 to 15 percent slopes

 TeG - Terrace escarpments



SOURCE: Bing Maps (2014)

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Wildomar 11 Acre Project
Soils

- Monserate sandy loam, shallow 5 to 15 percent slopes, eroded;
- Placentia fine sandy loam, 5 to 15 percent slopes; and
- Terrace escarpments.

5.3 Vegetation

The vegetation on the project site is highly disturbed due to past and current land use practices. In addition to the prefabricated house located on the northeast section of the property, the property boundaries and mid-section have been disked in the past for fire prevention. The vegetation cover on site consists of approximately 2.95 acres of buckwheat scrub habitat dispersed in scattered patches throughout the property, and approximately 8.05 acres of nonnative grasslands. The buckwheat scrub habitat ranges from 2 to 4 feet high. Dominant species on site at the time of the survey included California buckwheat (*Eriogonum fasciculatum*) and red brome (*Bromus madritensis* ssp. *rubens*). A complete list of the plant species observed on site is included in Appendix A.

Figure 4 shows vegetation and land use. Site photographs are provided as Figure 5.

5.4 Wildlife

Wildlife species observed during the survey include coastal California gnatcatcher (*Polioptila californica californica*), mourning dove (*Zenaida macroura*), California ground squirrel (*Spermophilus beecheyi*), and Audubon's cottontail (*Sylvilagus audubonii*). A complete list of the animal species observed on site is included in Appendix B.

6.0 RESULTS AND RECOMMENDATIONS

6.1 MSHCP Consistency Analysis

The proposed project is located within the Elsinore Area Plan of the MSHCP but is not located within a Criteria Area or adjacent to a Criteria Area or Conservation Area. Thus, the site is not subject to the Urban/Wildlands Interface Guidelines. Riparian/riverine resources are present, but vernal pool resources are absent. The property is within the MSHCP survey area for the burrowing owl. The proposed project is not located within any other MSHCP species survey areas. Riparian/Riverine resources, jurisdictional delineation, burrowing owl habitat assessment, and migratory birds are discussed in detail below.

6.2 Riparian/Riverine Resources

Two potential drainage features were identified on the project site, and are identified as Drainages 1 and 2 for purposes of this report. Drainage 2 is a swale-like feature that does not contain riparian/riverine resources. Although Drainage 1 was found to contain riparian riverine resources, flows to this drainage feature have been very recently cut off by adjacent development. As a result, this drainage will no longer be able to support riparian/riverine resources subject to compliance with MSHCP Section 6.1.2. These two drainage features are discussed in further detail in the following section.

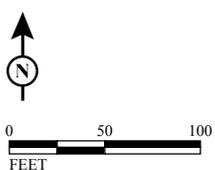


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- Project Location
- Photo Points
- Buckwheat Scrub
- Giant Wild Rye (*Elmus condensatus*)
- Nonnative Grassland
- Skunk Bush (*Rhus aromatica*)
- Area not surveyed

FIGURE 4



SOURCE: Bing Maps (2014)
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Wildomar 11 Acre Project
 Vegetation and Photo Locations



View looking east over buckwheat scrub and nonnative grassland (7/27/2015).



View looking south at general habitat and site conditions (7/27/2015).



View looking south at the northwestern section of the property (7/27/2015).



View looking southwest at an area of isolated giant wild rye growing on the slopes (7/27/2015).

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FIGURE 5

Wildomar 11 Acre Project
Site Photographs

6.3 Jurisdictional Waters and Streambeds

The Jurisdictional Delineation (Appendix C) found two potential drainage features (Drainage 1 and Drainage 2) on the project site. Based on aerial photograph review (Google Earth), Drainage 1 is an erosional feature that was not present on site until between 2006 and 2009 when the project to the north was originally graded for development. The grading activities incidentally directed runoff to the southwest and conveyed flows onto the project site, creating this drainage feature. Drainage 1 has a defined OHWM and bed and bank, and flowed into a storm drain via a 2-foot diameter concrete pipe along George Avenue. Vegetation growing within the drainage is primarily upland vegetation dominated by telegraph weed (*Heterotheca grandiflora*), deerweed (*Acmispon glaber*), California aster (*Corethrogyne filaginifolia*), and tree tobacco (*Nicotiana glauca*). A few individual salt cedar (*Tamarix ramosissima*) and mule fat (*Baccharis salicifolia*) are present in the southern end of the drainage.

Although Drainage 1 has a defined OHWM, bed and bank, and riparian vegetation, the adjacent project site has been very recently developed by residential housing and associated infrastructure, which has retained the flows that supported Drainage 1. As a result, the on-site drainage feature no longer has a direct water source and will revert to uplands. Therefore, Drainage feature 1 will no longer be able to support the hydrologic characteristics regulated by the USACE, CDFW, and RWQCB.

Drainage 2 lacks an OHWM, bed and bank, and is best described as a swale; thus, it would not be subject to USACE, CDFW, or RWQCB jurisdiction. Figure 6 shows non-jurisdictional areas.

6.4 Burrowing Owl Habitat Assessment

Burrowing owls are found in open, dry grasslands, agricultural and range lands, and desert habitats. They can also inhabit grass, forb, and shrub stages of pinyon and ponderosa pine habitats. They nest in abandoned burrows of ground squirrels or other fossorial animals, in pipes, under piles of rock or debris, and in other similar features. No burrowing owls, suitable burrows, or other burrowing owl sign were present on the property at the time of survey; thus, focused surveys were not required. However, burrowing owls have potential to use the area for foraging.

The burrowing owl is a migrant species, and site conditions are subject to change over time. Because the project site provides habitat for the burrowing owl, an MSHCP pre-construction survey is required within 30 days prior to beginning any site grading to ensure no burrowing owls have occupied the site and would be affected by construction activities. If project activities are planned during the burrowing owl nesting season (approximately February 1 through August 31), nesting burrowing owl surveys should be conducted within 3 days prior to disturbance to ensure birds protected under the MBTA and California Fish and Game Code are not disturbed by construction-related activities (i.e., brush clearing and noise).

6.5 Coastal California Gnatcatcher

The coastal California gnatcatcher is federally listed as a threatened species and State Species of Special Concern, and is an MSHCP covered species. The breeding season for the coastal California gnatcatcher extends from about February 15 through August 31, with peak nesting activity occurring



FIGURE 6

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-  Project Location
-  Non-Jurisdictional Drainage Feature
-  24" Culvert



SOURCE: Bing Maps (2014)

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from mid-March to mid-May. Gnatcatchers are found in coastal sage scrub (*Artemisia californica*), California buckwheat, and sage (*Salvia mellifera*, *S. Apiana*) habitat. The coastal California gnatcatcher is an MSHCP covered species. An individual coastal California gnatcatcher was observed vocalizing and foraging within the buckwheat scrub on the property. Because the coastal California gnatcatcher is an MSHCP covered species, focused surveys are not required.

Suitable nesting habitat (buckwheat scrub) for the coastal California gnatcatcher is of low value on the proposed project site at this time; however, because the gnatcatcher was observed foraging, it could potentially nest on the property. To avoid potential project effects to nesting California gnatcatchers, the following avoidance measures are required:

- Prior to construction, vegetation should be removed outside the gnatcatcher breeding season (February 15 through August 31).
- If vegetation cannot be removed outside the gnatcatcher nesting season (February 15 through August 31), nesting gnatcatcher surveys should be conducted within 3 days prior to project ground disturbance to ensure the gnatcatcher and other nesting birds protected under the MBTA and California Fish and Game Code are not disturbed by construction-related activities (i.e., brush clearing and noise).
- Should nesting gnatcatchers be found on or in the immediate vicinity (approximately 300 feet) of the project site, no construction or clearing will be conducted until the project biologist determines that the young have fledged or the nest is no longer active.

6.6 Migratory/Nesting Birds

Raptors and other nesting bird species are protected by California Fish and Game Code Sections 3503 and 3503.5 and by the MBTA (16 USC 703–711), which make it unlawful to take, possess, or needlessly destroy the nest or eggs of any migratory bird or bird of prey.

Vegetation on site may provide habitat for nesting birds. It is recommended that initial ground-disturbing activities be conducted outside the general bird nesting season (February 15 through August 31). If project activities are planned during the general bird nesting season, nesting bird surveys would be required within 3 days prior to any ground-disturbing activities to ensure birds protected under the MBTA and California Fish and Game Code are not affected.

7.0 REFERENCES

- California Department of Fish and Wildlife, Natural Diversity Database. 2014. *Rarefind 5* online application (<https://map.dfg.ca.gov/rarefind/>). Accessed August 20, 2014.
- California Native Plant Society. 2014. *Inventory of Rare and Endangered Plants* (<http://www.cnps.org/inventory>). Accessed August 20, 2014.
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- Riverside County Transportation and Land Management Agency. 2003. Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). Final MSHCP—Volumes 1 and 2. Approved June 17, 2003.
- Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. *A Manual of California Vegetation, Second Edition*. California Native Plant Society, Sacramento, California.
- United States Fish and Wildlife Service. 2002. *Migratory Bird Treaty Act*. A Guide to the Laws and Treaties of the United States for Protecting Migratory Birds. Last Revised: May 21, 2002. <http://www.fws.gov/migratorybirds/intrnltr/treatlaw.html#mbta>.

APPENDIX A

VASCULAR PLANT SPECIES OBSERVED

The following vascular plant species were observed in the specified study area by LSA biologists.

VASCULAR PLANT SPECIES OBSERVED

Scientific Name	Common Name
EUDICOTS	
Adoxaceae	Muskroot Family
<i>Sambucus nigra</i> ssp. <i>caerulea</i>	Blue elderberry
Amaranthaceae	Amaranth Family
<i>Amaranthus albus</i> (non-native species)	Tumbling pigweed
Anacardiaceae	Sumac Family
<i>Rhus aromatica</i>	Skunk bush
Asteraceae	Sunflower Family
<i>Artemisia californica</i>	California sagebrush
<i>Baccharis salicifolia</i> ssp. <i>salicifolia</i>	Mule fat
<i>Centaurea melitensis</i> (non-native species)	Tocalote
<i>Corethrogyne filaginifolia</i> var. <i>californica</i>	California aster
<i>Deinandra fasciculata</i>	Fascicled tarweed
<i>Helianthus annuus</i>	Western sunflower
<i>Heterotheca grandiflora</i>	Telegraph weed
<i>Heterotheca sessiliflora</i> ssp. <i>echioides</i>	Bristly golden aster
<i>Lessingia glandulifera</i> var. <i>glandulifera</i>	Valley lessingia
<i>Pseudognaphalium californicum</i>	California everlasting
Boraginaceae	Borage Family
<i>Amsinckia menziesii</i> var. <i>intermedia</i>	Common fiddleneck
<i>Heliotropium curassavicum</i>	Salt heliotrope
Brassicaceae	Mustard Family
<i>Hirschfeldia incana</i> (non-native species)	Shortpod mustard
<i>Sisymbrium irio</i> (non-native species)	London rocket
Euphorbiaceae	Spurge Family
<i>Chamaesyce albomarginata</i>	Rattlesnake spurge
<i>Croton setigerus</i>	Doveweed
Fabaceae	Legume Family
<i>Acmispon glaber</i>	Coastal deerweed
<i>Astragalus pomonensis</i>	Pomona locoweed
Lamiaceae	Mint Family
<i>Trichostema lanceolatum</i>	Vinegar weed

VASCULAR PLANT SPECIES OBSERVED

Scientific Name	Common Name
Onagraceae	Evening-primrose Family
<i>Epilobium canum</i> ssp. <i>canum</i>	California fuchsia
Polygonaceae	Buckwheat Family
<i>Eriogonum fasciculatum</i>	California buckwheat
<i>Eriogonum gracile</i> var. <i>gracile</i>	Slender woolly wild buckwheat
Salicaceae	Willow Family
<i>Salix gooddingii</i>	Goodding's black willow
Solanaceae	Nightshade Family
<i>Nicotiana glauca</i> (non-native species)	Tree tobacco
Tamaricaceae	Tamarisk Family
<i>Tamarix ramosissima</i> (non-native species)	Saltcedar
MONOCOTS	
Poaceae	Grass Family
<i>Bromus diandrus</i> (non-native species)	Ripgut grass
<i>Bromus madritensis</i> ssp. <i>Rubens</i> (non-native species)	Red brome
<i>Elymus condensatus</i>	Giant wild-rye
<i>Schismus barbatus</i> (non-native species)	Mediterranean grass

Taxonomy and scientific nomenclature generally conform to Baldwin, B.G., D.H. Goldman et al., eds. (2012; *The Jepson Manual: Vascular Plants of California*, Second Edition; University of California Press, Berkeley and Los Angeles, California).

Common names for each taxa generally conform to Roberts, F.M., Jr. (2008; *The Vascular Plants of Orange County, California: An Annotated Checklist*; F.M. Roberts Publications, San Luis Rey, California) except where Abrams, L. (1923, 1944, and 1951; *Illustrated Flora of the Pacific States: Washington, Oregon, and California*, Vols. I–III; Stanford University Press, Stanford, California) and Abrams, L. and Ferris, R.S. (1960; *Illustrated Flora of the Pacific States: Washington, Oregon, and California*, Vol. IV; Stanford University Press, Stanford, California) were used, particularly when species-specific common names were not identified in Roberts, F.M., Jr. (2008).

APPENDIX B

WILDLIFE SPECIES OBSERVED

This is a list of the conspicuous aerial insects (i.e., damselflies, dragonflies, and butterflies), bony fishes, amphibians, reptiles, birds, and mammals noted in the study area by LSA biologists. Presence may be noted if a species is seen or heard, or identified by the presence of tracks, scat, or other signs.

WILDLIFE SPECIES OBSERVED

Scientific Name	Common Name
LEPIDOPTERA	BUTTERFLIES
Pieridae	Whites and Sulphurs
<i>Pontia protodice</i>	Checkered white
Lycaenidae	Gossamer-Wing Butterflies
<i>Plebejus acmon</i>	Acmon blue
Nymphalidae	Brush-Footed Butterflies
<i>Agraulis vanillae</i>	Gulf fritillary
<i>Vanessa cardui</i>	Painted lady
REPTILIA	REPTILES
Phrynosomatidae	Phrynosomatid Lizards
<i>Sceloporus occidentalis</i>	Western fence lizard
<i>Uta stansburiana</i>	Common side-blotched lizard
AVES	BIRDS
Accipitridae	Hawks, Kites, Eagles, and Allies
<i>Accipiter cooperii</i>	Cooper's hawk
Columbidae	Pigeons and Doves
<i>Zenaida macroura</i>	Mourning dove
Trochilidae	Hummingbirds
<i>Archilochus alexandri</i>	Black-chinned hummingbird
Tyrannidae	Tyrant Flycatchers
<i>Sayornis saya</i>	Say's phoebe
Corvidae	Crows and Jays
<i>Corvus brachyrhynchos</i>	American crow
Poliopitilidae	Gnatcatchers and Gnatwrens
<i>Poliopitila californica californica</i>	Coastal California gnatcatcher
Fringillidae	Fringilline and Cardueline Finches and Allies
<i>Haemorhous mexicanus</i>	House finch
MAMMALIA	MAMMALS
Sciuridae	Squirrels, Chipmunks, and Marmots
<i>Spermophilus beecheyi</i>	California ground squirrel
Leporidae	Rabbits and Hares
<i>Sylvilagus audubonii</i>	Audubon's cottontail

Taxonomy and nomenclature are based primarily on the following:

Damselflies and Dragonflies: Paulson, D. (2009, *Dragonflies and Damselflies of the West*, Princeton University Press, Princeton, New Jersey).

Butterflies: North American Butterfly Association (2001, *NABA Checklist and English Names of North American Butterflies*, Second Edition, North American Butterfly Association, Morristown, New Jersey, 2003 update in *American Butterflies* 11: 24-27; see <http://www.naba.org/pubs/checklst.html>).

Fishes: Moyle, P.B. (2002, *Inland Fishes of California*, Second Edition, University of California Press, Berkeley).

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APPENDIX C

JURISDICTIONAL DELINEATION

DELINEATION OF JURISDICTIONAL WATERS

**WILDOMAR II-ACRE PROJECT
CITY OF WILDOMAR
RIVERSIDE COUNTY, CALIFORNIA**

LSA

March 2016

DELINEATION OF JURISDICTIONAL WATERS

**WILDOMAR II-ACRE PROJECT
CITY OF WILDOMAR
RIVERSIDE COUNTY, CALIFORNIA**

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LSA Project No. MMI1501

The logo for LSA Associates, Inc. consists of the letters 'LSA' in a bold, blue, sans-serif font.

March 2016

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INTRODUCTION

LSA Associates, Inc. (LSA) prepared the following evaluation for Assessor's Parcel Numbers (APNs) 362-250-001 and 362-250-026. This evaluation serves to document the results of regulatory jurisdiction for use by the United States Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), and the California Department of Fish and Wildlife (CDFW) as part of their review of applications for permit authorization under Sections 404 and 401 of the Federal Clean Water Act (CWA) and for Streambed Alteration Agreement processing under Section 1602 of the California Fish and Game Code.

The findings and conclusions presented in this report, including the location and extent of wetlands and other waters subject to regulatory jurisdiction, represent the professional opinion of the consultant biologists. These findings and conclusions should be considered preliminary until verified by the USACE and the CDFW.

SITE DESCRIPTION

The 11-acre project site (property) is located in the City of Wildomar, Riverside County, California, east of the intersection of Depasqualle Road and George Avenue, and is bounded on the west by Iodine Springs Road. The project site is bordered by residential housing west of George Avenue, rural residential housing east of Iodine Springs Road, construction of a residential development to the north, and vacant land to the south. Geographically, the property is located within Section 3, Township 6 South, Range 3 West, as shown on the United States Geological Survey (USGS) *Murrieta, California* 7.5-minute quadrangle (see Figure 1).

Elevations in the property area range from approximately 1,340 to 1,360 feet above mean sea level (amsl). The undeveloped topography adjacent to the property consists of gradual west-sloping hills. The Santa Ana Mountains are located to the west, and an area of unnamed hills is located to the east.

The climate is classified as Mediterranean (i.e., arid climate with hot, dry summers and moderately mild, wet winters). The average annual precipitation is approximately 11.14 inches. Although most of the precipitation occurs from November through April, thunderstorms occur at all times of the year and can cause extremely high precipitation rates. Temperatures typically range between 37 and 98 degrees Fahrenheit (°F).

The property is located within the Santa Margarita Hydrological Unit, which includes portions of Marine Corps Base Camp Pendleton and the civilian population areas of Murrieta, Temecula, and part of Fallbrook. The total area of the watershed is approximately 750 square miles.

Hydrologic Areas within the Santa Margarita Hydrological Unit are Ysidora, Deluz, Murrieta, Auld, Pechanga, Wilson, Cave Rocks, Aguanga, and Oak Grove. The property is within the Hydrologic Subarea of Murrieta. This watershed conveys water from east to west into Murrieta Creek, which flows south and converges with the Santa Margarita River, which conveys water west and ultimately into the Pacific Ocean.

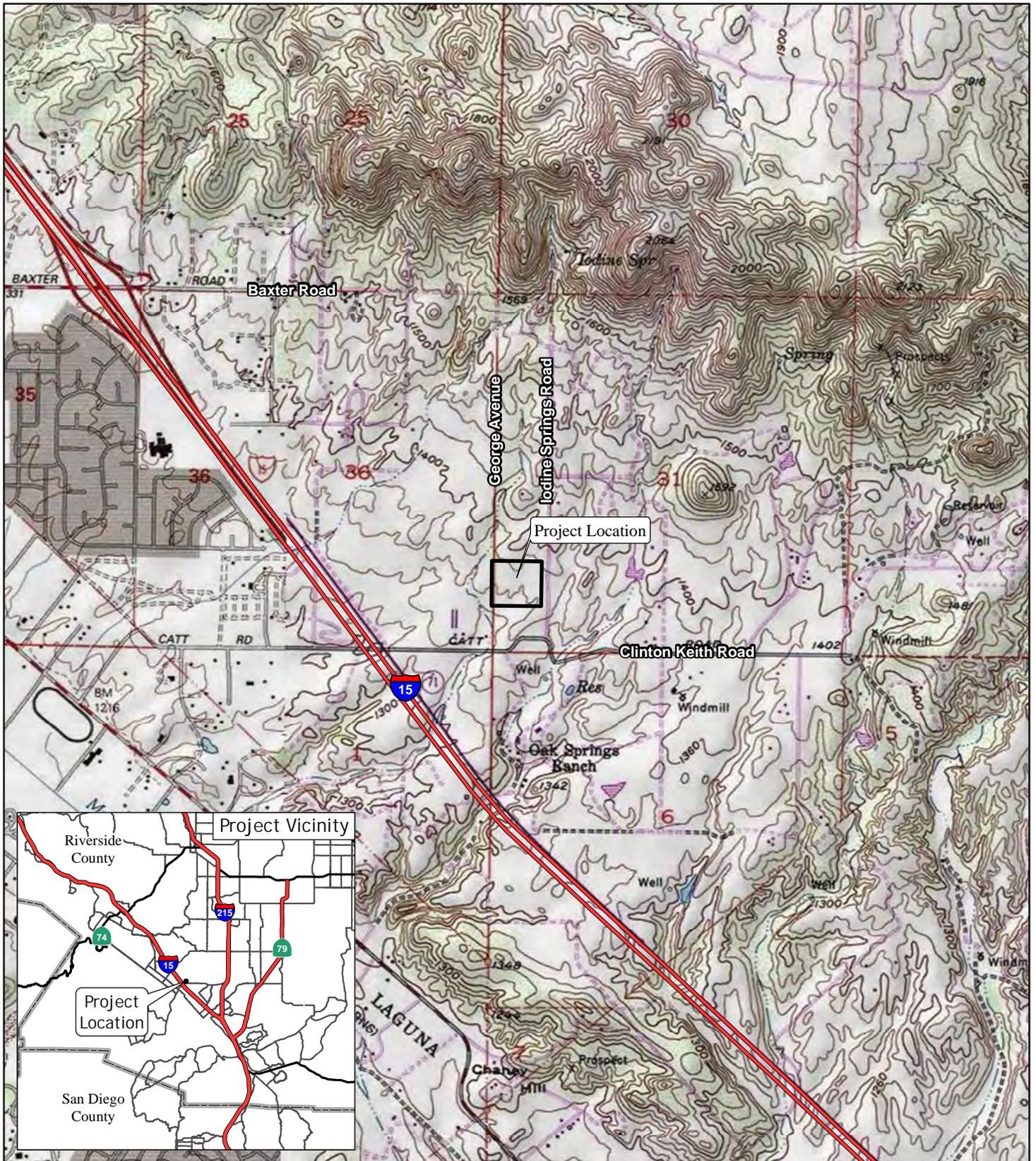


FIGURE 1

LSA

LEGEND

- Project Location
- Freeways/Toll Roads
- Conventional Highway



0 1000 2000
FEET

SOURCE: USGS 7.5' Quad - Murrieta (1979), CA
I:\MMI1501\GIS\ProjectLocation_USGS.mxd (3/1/2016)

Wildomar 11 Acre Project
Project Location and Vicinity

REGULATORY BACKGROUND

United States Army Corps of Engineers

The USACE regulates discharges of dredged or fill material into waters of the United States. These waters include wetland and nonwetland bodies of water that meet specific criteria. USACE regulatory jurisdiction pursuant to Section 404 of the CWA is founded on a connection, or nexus, between the water body in question and interstate commerce. This connection may be direct, through a tributary system linking a stream channel with traditional navigable waters (TNWs) used in interstate or foreign commerce, or indirect, through a nexus identified in the USACE regulations. The following definition of waters of the United States is taken from the discussion provided at 33 Code of Federal Regulations (CFR) 328.3:

“The term waters of the United States means:

- (1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce ...;
- (2) All interstate waters including interstate wetlands;
- (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams) ... the use, degradation or destruction of which could affect interstate or foreign commerce ...;
- (4) All impoundments of waters otherwise defined as waters of the United States under the definition; and
- (5) Tributaries of waters defined in paragraphs (a) (1)–(4) of this section.”

The USACE typically regulates as waters of the United States any body of water displaying an ordinary high water mark (OHWM). USACE jurisdiction over nontidal waters of the United States extends laterally to the OHWM or beyond the OHWM to the limit of any adjacent wetlands, if present (33 CFR 328.4). The OHWM is defined as “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 area” (33 CFR 328.3). Jurisdiction typically extends upstream to the point where the OHWM is no longer perceptible.

As discussed above, USACE regulatory jurisdiction under Section 404 of the CWA is founded on a connection between the water body in question and interstate commerce. In the past, an indirect nexus could potentially be established if isolated waters provided habitat for migratory birds, even in the absence of a surface connection to a navigable water of the United States. The rule that enabled the USACE to expand its jurisdiction over isolated waters became known as the Migratory Bird Rule. However, on January 9, 2001, the United States Supreme Court narrowly limited the USACE jurisdiction of “nonnavigable, isolated, intrastate” waters based solely on the use of such waters by migratory birds, and particularly the use of indirect indicators of interstate commerce (e.g., use by migratory birds that cross state lines) as a basis for jurisdiction. The Court’s ruling derives from the case *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, No. 99-1178 (SWANCC). The Supreme Court determined that the USACE exceeded its statutory authority by

asserting CWA jurisdiction over an abandoned sand and gravel pit in northern Illinois that provides habitat for migratory birds.

In 2006, the United States Supreme Court further considered the USACE jurisdiction of “waters of the United States” in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* (126 S. Ct. 2208), collectively referred to as *Rapanos*. The Supreme Court concluded that wetlands are “waters of the United States” if they significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as navigable. On December 2, 2008, the USACE issued the most recent guidance regarding the *Rapanos* decision. This guidance states that the USACE will continue to assert jurisdiction over TNWs, wetlands adjacent to TNWs, relatively permanent nonnavigable tributaries that have a continuous flow at least seasonally (typically 3 months), and wetlands that directly abut relatively permanent tributaries. The USACE will determine jurisdiction over waters that are nonnavigable tributaries that are not relatively permanent and wetlands adjacent to nonnavigable tributaries that are not relatively permanent only after making a finding of significant nexus to TNWs. The USACE will generally not assert jurisdiction over swales, erosional features, or ditches excavated wholly in and draining only uplands that do not carry a relatively permanent flow of water. However, the USACE does reserve the right to regulate these waters on a case-by-case basis.

Furthermore, the preamble to USACE regulations (Preamble Section 328.3, Definitions) states that the USACE does not generally consider the following waters to be waters of the United States. The USACE does, however, reserve the right to regulate these waters on a case-by-case basis.

- Nontidal drainage and irrigation ditches excavated on dry land.
- Artificially irrigated areas that would revert to upland if the irrigation ceased.
- Artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water and used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing.
- Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating and/or diking dry land to retain water for primarily aesthetic reasons.
- Water-filled depressions created in dry land incidental to construction activity and pits excavated in dry land for purposes 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.

Wetlands

Wetland delineations for Section 404 purposes must be conducted according to the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0) (*Regional Supplement*) (Corps 2008) and the *Corps 1987 Wetland Delineation Manual* (*1987 Manual*) (Environmental Laboratory 1987). Where there are differences between the two documents, the *Regional Supplement* takes precedence over the *1987 Manual*.

The USACE and the United States Environmental Protection Agency (EPA) define wetlands as follows:

“Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions.”

In order to satisfy the USACE wetland definition, an area must possess three wetland characteristics: hydrophytic vegetation, hydric soils, and wetland hydrology. Each characteristic has a specific definition and criteria that must be satisfied in order for that particular wetland characteristic to be met. Several parameters (indicators) may be analyzed to determine whether the criteria are satisfied. Conversely, if an area lacks one of the three characteristics under normal circumstances, the area is nonwetland.

Hydrology. Under natural conditions, development of hydrophytic vegetation and hydric soils is dependent on wetland hydrology. Areas with wetland hydrology are those where the presence of water has an overriding influence on vegetation and soil characteristics due to anaerobic and reducing conditions, respectively (Environmental Laboratory 1987). The wetland hydrology parameter is satisfied if the area is seasonally inundated or saturated to the surface for a minimum of 14 consecutive days during the growing season in most years (USACE 2008).

Hydrology is often the most difficult criterion to measure in the field due to seasonal and annual variations in water availability. Some of the indicators commonly used to identify wetland hydrology include visual observation of inundation or saturation, watermarks, recent sediment deposits, surface scour, and oxidized root channels (rhizospheres) resulting from prolonged anaerobic conditions.

Hydric Soils.¹ Hydric soils are defined as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part.² The following criteria³ reflect those soils that are considered likely to meet the definition of a hydric soil:

1. All Histels except Folistels and Histosols except Folists; or
2. Soils in Aquic suborders, great groups or subgroups, the Albolls suborder, the Historthels great group, the Histoturbels great group, Pachic subgroups, or Cumulic subgroups that are:
 - a. Somewhat poorly drained and have a water table equal to 0.0 feet from the surface during the growing season; or
 - b. Poorly drained or very poorly drained and have either:
 - 1) A water table equal to 0.0 feet from the surface during the growing season if textures are coarse sand, sand, or fine sand in all layers within a depth of 20 inches;

¹ The hydric soil definition and criteria included in the 1987 Corps Manual are obsolete. Users of the Manual are directed to the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) website for the most current information on hydric soils.

² Current definition as of 1994 (Federal Register [FR] July 13, 1994).

³ Although Criterion 2 is listed by NRCS as an indicator for identification of hydric soils, this criterion cannot be used to document the presence of a hydric soil.

- 2) A water table less than or equal to 0.5 foot from the surface during the growing season if permeability is greater than 6.0 inches/hour in all layers within a depth of 20 inches; or
- 3) A water table less than 1.0 foot from the surface during the growing season if permeability is less than 6.0 inches/hour in any layer within a depth of 20 inches.
3. Soils that are frequently ponded for a long or very long duration¹ during the growing season.
4. Soils that are frequently flooded for a long or very long duration during the growing season.

Hydric soils develop under conditions of saturation and inundation combined with microbial activity in the soil that causes a depletion of oxygen. While saturation may occur at any time of year, microbial activity is limited to the growing season when the soil temperature is above biologic zero. Biogeochemical processes that occur under anaerobic conditions during the growing season result in the distinctive morphologic characteristics of hydric soils.

The USACE has a number of field indicators that may be used to identify hydric soils. The USACE has also developed a number of field indicators that may demonstrate the presence of hydric soils. These indicators include hydrogen sulfide generation, accumulation of organic matter, and the reduction, translocation and/or accumulation of iron and other reducible elements. These processes result in soil characteristics that persist during both wet and dry periods. Separate indicators have been developed for sandy soils and for loamy and clayey soils.

Hydrophytic Vegetation. Hydrophytic vegetation is plant life that grows in, and is typically adapted for life in, permanently or periodically saturated soils. The hydrophytic vegetation criterion is met if more than 50 percent of the dominant plant species from all strata (tree, shrub, and herb layers) are considered hydrophytic. Hydrophytic species are those included on the 2015 National Wetland Plant List published by the United States Fish and Wildlife Service (USFWS). Each species on the list is rated according to a wetland indicator category, as shown in Table A.

Table A: Hydrophytic Vegetation

Category		Probability
Obligate Wetland	OBL	Almost always occur in wetlands (estimated probability >99%) under natural conditions
Facultative Wetland	FACW	Usually occur in wetlands (estimated probability 67%–99%)
Facultative	FAC	Equally likely to occur in wetlands and nonwetlands (estimated probability 34%–66%)
Facultative Upland	FACU	Usually occur in nonwetlands (estimated probability 67%–99%)
Obligate Upland	UPL	Almost always occur in nonwetlands (estimated probability >99%) under natural conditions

To be considered hydrophytic, the species must have wetland indicator status (i.e., be rated as OBL, FACW, or FAC).

¹ A long duration is defined as a single event ranging from 7 to 30 days. A very long duration is defined as a single event that lasts longer than 30 days.

California Department of Fish and Wildlife

The CDFW, through provisions of the State of California Code of Regulations, is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be substantially adversely affected. Streams (and rivers) are defined by the presence of a channel bed and banks, and at least an ephemeral flow of water. The CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by the CDFW.

The CDFW has not defined wetlands for jurisdictional purposes. The CDFW generally includes, within the jurisdictional limits of streams and lakes, any riparian habitat present. Riparian habitat includes willows, alders, and other vegetation typically associated with the banks of a stream or lake shoreline. In most situations, wetlands associated with a stream or lake would fall within the limits of riparian habitat. Thus, defining the limits of CDFW jurisdiction based on riparian habitat will typically include any wetland areas and may include additional areas that do not meet USACE criteria for soils and/or hydrology (e.g., where riparian woodland canopy extends beyond the banks of a stream away from frequently saturated soils). Wetlands not associated with a lake, stream, or other regulated areas are generally not subject to CDFW jurisdiction.

Regional Water Quality Control Board

The California RWQCB is responsible for the administration of Section 401 of the CWA. Typically, the areas subject to RWQCB jurisdiction coincide with those of the USACE (i.e., waters of the United States, including any wetlands). The RWQCB may also assert authority over waters of the State under waste discharge requirements pursuant to the Porter-Cologne Act.

METHODS

Prior to conducting the fieldwork for the proposed project, soil types in the study area were checked using the Web Soil Service, operated by the USDA NRCS.

LSA biologist Denise Woodard conducted the jurisdictional delineation field evaluations on March 10, 2016. The entire study area was surveyed on foot for potential jurisdictional areas that could contain wetland and/or nonwetland jurisdictional waters as well as potential riparian resources. General site characteristics were also noted.

Two potential drainages, Drainages 1 and 2, were examined on the property. LSA collected data according to current USACE methodologies. LSA searched for potential wetland waters and then assessed the areas using on-site examination according to the USACE three-parameter method (vegetation, soils, and hydrology) of wetlands delineation (2008 Manual; *Regional Supplement*). Hydrophytic vegetation was not present; therefore, no soil pits were dug. Since no wetland waters are present, the limits of the water bodies for USACE and RWQCB purposes were based solely on the OHWM.

Potential CDFW jurisdiction was determined based on the presence of a bed and bank, which constitutes the jurisdictional streambed. The streambed is defined as the physical features of the channel invert and the channel banks, as measured from the highest point that water flows, and typically has shelving, changes in the character of soil, or an absence of upland terrestrial vegetation.

The potential nonwetland waters were determined based on the presence of OHWM and nexus to a TNW. Streams subject to CDFW jurisdiction were evaluated to include the bed and bank and associated riparian habitat.

An aerial photograph was used to assist in mapping field conditions. Measurements of potential jurisdictional areas were taken in the field and mapped on an aerial photograph. The limits of jurisdictional areas were digitized using geographic information system (GIS) software based on the mapped locations of measured widths collected in the field. Any potential jurisdictional areas were calculated using GIS software to calculate the mapped areas.

RESULTS AND DISCUSSION

Drainage Characteristics

Two potential drainage features were identified on the project site, and are identified as Drainage 1 and Drainage 2 for purposes of this report. Based on aerial photograph review (Google Earth), Drainage 1 is an erosional feature that was not present on site until between 2006 and 2009 when the project to the north was originally graded for development. The grading activities incidentally directed runoff to the southwest and conveyed flows onto the project site, creating this drainage feature. Drainage 1 has a defined OHWM and bed and bank, and conveyed flows into a storm drain via a 2-foot diameter concrete pipe along George Avenue. Vegetation growing within the drainage is primarily upland vegetation dominated by telegraph weed (*Heterotheca grandiflora*), deerweed (*Acmispon glaber*), California aster (*Corethrogyne filaginifolia*), and tree tobacco (*Nicotiana glauca*). A few individual salt cedar (*Tamarix ramosissima*) and mule fat (*Baccharis salicifolia*) are present in the southern end of the drainage.

Although Drainage 1 has a defined OHWM, bed and bank, and riparian vegetation, the adjacent project site has been very recently developed by residential housing and associated infrastructure, which has retained the flows that supported Drainage 1. As a result, the on-site drainage feature no longer has a direct water source and will revert to uplands. Therefore, Drainage feature 1 will no longer be able to support the hydrologic characteristics regulated by the USACE, CDFW and RWQCB. Drainage 2 lacks an OHWM, bed and bank, and is best described as a swale. Vegetation associated with the swale includes black elderberry (*Sambucus nigra*), fragrant sumac (*Rhus aromatica*), giant wild rye (*Leymus condensatus*), tocalote (*Centaurea melitensis*), and red brome (*Bromus madretensis* ssp. *madritensis*). Because drainage D2 lacks an OHWM, bed and bank, and wetland/riparian vegetation, it would not be subject to USACE, CDFW, or RWQCB jurisdiction.

Figure 2 shows the non-jurisdictional drainage features evaluated and Figure 3 provides site photographs.

CONCLUSION

The flows to Drainage 1 have been cut off by adjacent development and will no longer be able to support hydrologic features including an OHWM, bed and bank, and riparian habitat. Drainage 2 does not have an OHWM, bed and bank, and wetland/riparian vegetation. Therefore, these two drainage features would not be subject to the regulatory authority of the USACE, CDFW, and RWQCB.

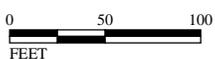


FIGURE 2

L S A

LEGEND

-  Project Location
-  Non-Jurisdictional Drainage Feature
-  24" Culvert
-  Photo Locations



SOURCE: Bing Maps (2014)

E:\MMI1501\GIS\JD_Impacts.mxd (3/16/2016)

Wildomar 11 Acre Project
Non-Jurisdictional Drainage Features



1. View looking at area that once supported the onsite drainage feature D1, but now has been captured by residential development (March 10, 2016).



2. View of portion of drainage feature D1 that has been filled by adjacent residential development (March 10, 2016).



3. View of the northern terminus of drainage feature D1 (March 10, 2016).



4. View of southern end of drainage feature D1 (March 10, 2016).



5. View of drainage feature D1 where it terminates with the 24 inch concrete culvert at George Avenue (March 10, 2016).



6. View of drainage feature D2 (swale) and upland buckwheat scrub and non-native grasslands (March 10, 2016).



7. View of drainage feature D2 (swale), with giant wild rye growing on slopes (March 10, 2016).

DISCLAIMER

The findings and conclusions presented in this report, including the locations and extents of wetlands and other waters subject to regulatory jurisdiction (or lack thereof), represent the professional opinion of the consultant biologists. These findings and conclusions should be considered preliminary until verified by the USACE, the CDFW, and the RWQCB.

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