HELIX
Environmental Planning

# Orchard Hills

Biological Technical Report

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# Orchard Hills
# Biological Technical Report

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## GLOSSARY OF TERMS AND ACRONYMS

| | |
|---|---|
| BMO | Biological Mitigation Order |
| CDFG | California Department of Fish and Game |
| CDFW | California Department of Fish and Wildlife |
| CEQA | California Environmental Quality Act |
| CNDDB | California Natural Diversity Database |
| CNPS | California Native Plant Society |
| Corps | U.S. Army Corps of Engineers |
| County | County of San Diego |
| CWA | Clean Water Act |
| DCSS | Diegan coastal sage scrub |
| DEV | Developed land |
| DH | Disturbed habitat |
| EPA | Environmental Protection Agency |
| ESA | Endangered Species Act |
| EW | Eucalyptus woodland |
| HCP | Habitat Conservation Plan |
| HELIX | HELIX Environmental Planning, Inc. |
| HLP | Habitat Loss Permit |
| MBTA | Migratory Bird Treaty Act |
| MSCP | Multiple-Species Conservation Plan |
| NCCP | Natural Communities Conservation Program |
| NNG | Non-native grassland |
| NPPA | Native Plant Protection Act |
| OHWM | Ordinary high water mark |
| PAMA | Pre-Approved Mitigation Area |
| RCA | Resource Conservation Area |
| RPO | Resource Protection Ordinance |
| RWQCB | Regional Water Quality Control Board |
| USFWS | U.S. Fish and Wildlife Service |
| USGS | U.S. Geological Survey |

# SUMMARY

This biological technical report was prepared to evaluate the proposed Orchard Hills project. The approximately 12.5-acre project site is within an unincorporated area of San Diego County bounded by the City of Escondido on the north and east and the City of San Marcos on the west and southwest. The site is within the North County Metropolitan Subregional Plan Area outside the County's Multiple Species Conservation Program (MSCP) boundaries but within the boundary of the North County MSCP. The North County MSCP designation for most of the site is Existing Agriculture outside the Pre-Approved Mitigation Area and for a portion of it is Existing Agriculture Important for Preserve Design.

The project applicant proposes construction of 20 single-family residential lots and 3 streets and easement lots.

The project site supports 5 vegetation communities: Diegan coastal sage scrub (including disturbed), non-native grassland, eucalyptus woodland, disturbed habitat, and developed land. In addition, a California Department of Fish and Wildlife (CDFW) jurisdictional streambed flows through the eastern portion of the project site.

No listed plant or animal species were observed or detected on site. Protocol surveys for coastal California gnatcatcher (*Polioptila californica californica*) were negative. One sensitive plant species (Parry's tetracoccus [*Tetracoccus dioicus*]) and 3 sensitive animal species (orange-throated whiptail [*Cnemidophorus hyperythrus beldingi*], Cooper's hawk [*Accipiter cooperii*], and southern California rufous-crowned sparrow [*Aimophila ruficeps canescens*]) were observed/detected on site.

The portion of the City of San Marcos to the southwest and west of the site is developed. The portion of the City of Escondido to the north and east of the site consists of undeveloped native habitat. Natural features within the vicinity of the project site include the Merriam Mountains to the northeast. The Merriam Mountains Resource Conservation Area provides high quality wildlife habitat and is part of a regional wildlife corridor connecting with Daley Ranch and Rancho Guejito via Moosa Canyon and the slopes above Jesmond Dene. The project site itself is largely disturbed and contributes little to the function of that wildlife corridor.

The proposed project would result in direct or indirect impacts to the entire project site including 2.8 acres of Diegan coastal sage scrub (including disturbed), 5.9 acres of non-native grassland, 2.4 acres of eucalyptus woodland, 0.6 acre of disturbed habitat, and 0.8 acre of developed land. Additionally, 0.02 acre of CDFW jurisdictional streambed would be impacted.

No direct impacts would occur to sensitive orange-throated whiptail, Cooper's hawk, or southern California rufous-crowned sparrow, and potential indirect impacts to those species would be less than significant. Impacts to Parry's tetracoccus would be mitigated at a 2:1 ratio through implementation of one or a combination of the following measures: (a) Acquisition and preservation of occupied habitat located at an approved off-site location in the region; (b) Planting of Parry's tetracoccus container stock and salvage and translocation of impacted Parry's tetracoccus individuals to an approved off-site location in the region; and/or (c) Purchase of

credits from an approved mitigation bank in the region demonstrated to support occupied Parry's tetracoccus habitat.

Impacts to Diegan coastal sage scrub would be mitigated at a 2:1 ratio (5.6 acres) and impacts to non-native grassland would be mitigated at a 0.5:1 ratio (2.95 acre) with purchase of appropriate mitigation credits from Daley Ranch or another approved mitigation bank. Impacts to CDFW jurisdictional streambed also would be mitigated at 1:1 (0.02 acre) through purchase of appropriate mitigation credits from an approved mitigation bank. Impacts to eucalyptus woodland, disturbed habitat, and developed land do not require mitigation.

Implementation of mitigation measures would ensure that all project impacts are reduced to below a level of significance.

# 1.0 INTRODUCTION

## 1.1 PURPOSE OF THE REPORT

A biological resources study was conducted for the proposed Orchard Hills project to provide the project applicant, County of San Diego (County), resource agencies, and the public with current biological data to satisfy review of the proposed project under the California Environmental Quality Act (CEQA) and to demonstrate compliance with federal, state, and County regulations. This report describes the site's current biological conditions, vegetation communities, and plant and wildlife species observed or detected during the surveys, and identifies those resources that are sensitive. It also identifies sensitive species with potential to occur on site, assesses potential impacts of the proposed project, and identifies potential mitigation measures.

## 1.2 PROJECT LOCATION AND DESCRIPTION

### 1.2.1 Project Location

The 12.5-acre triangular-shaped project site (Assessor's Parcel Numbers 218-220-10 and -17) is located in an unincorporated portion of San Diego County and is bounded by the City of Escondido on the north and east, and the City of San Marcos on the west and southwest (Figures 1 and 2). Specifically, the project site is located between Richland Road and the Vista Canal, within Section 1, Township 12 South, Range 3 West on the U.S. Geological Survey (USGS) 7.5-minute San Marcos quadrangle map (Figure 2).

The project site is located within the North County Metropolitan Subregional Plan area outside the County's Multiple Species Conservation Program (MSCP) boundaries but within the boundary of the North County MSCP. The North County MSCP designation for most of this site is Existing Agriculture outside the Pre-Approved Mitigation Area (PAMA) and for a portion of it is Existing Agriculture Important for Preserve Design.

### 1.2.2 Project Description

The project proposes 20 single-family residential lots and 3 streets and easements lots. The Vallecitos Municipal Water District would provide water and sewer service and the San Marcos Fire Protection District would provide fire protection.

## 1.3 SURVEY METHODS

### 1.3.1 Literature Review

Prior to conducting biological field surveys, HELIX Environmental Planning, Inc. (HELIX) conducted searches of the California Natural Diversity Database (CNDDB; 2006) and California Native Plant Society (CNPS; 2008) online database for information regarding sensitive species known to occur within the project vicinity.

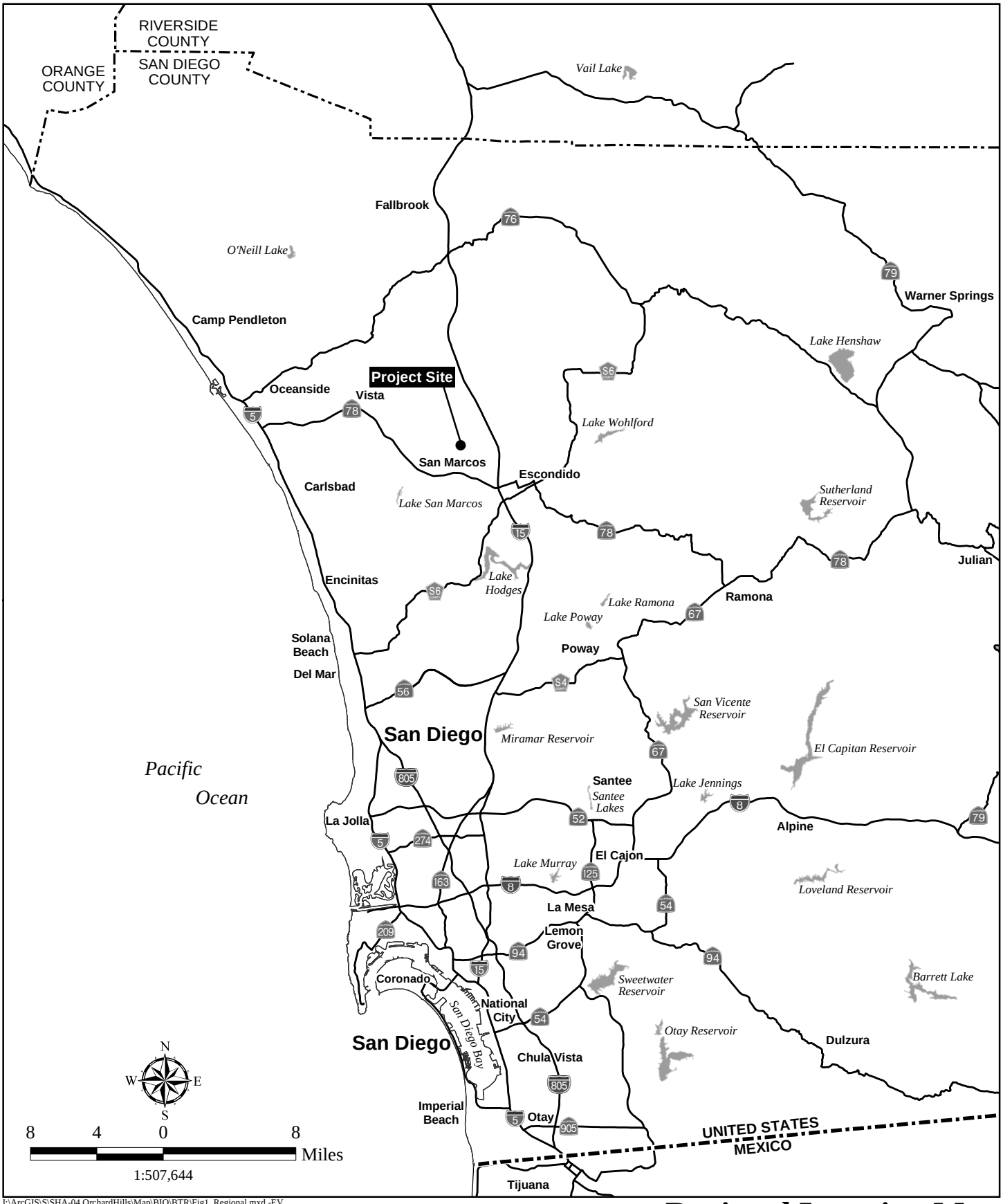
### 1.3.2 General Biological Survey

On December 4, 2006, HELIX biologist Shelby Howard mapped vegetation and conducted general botanical and zoological surveys (Table 1). Vegetation communities within the project site and 100 feet off site were mapped on a 1"=200' scale aerial photograph of the project site. Vegetation was classified and mapped according to the County's biological resource mapping requirements (County 2008). Plant identifications were made in the field or later in the laboratory through comparison with photographs or voucher specimens. All animal identifications were made by direct visual observation or indirectly by detection of calls or scat. This survey was repeated on June 7, 2012, by HELIX biologist George Aldridge to update vegetation mapping and species lists.

Surveys in 2006 and 2012 included directed habitat assessments for the California state species of special concern and County Group 1 sensitive animal, burrowing owl (*Athene cunicularia*). Most of the eastern portion of the site was in a disturbed condition in 2006 and did not provide suitable habitat for burrowing owl. No burrowing owl individuals, potential burrows, or burrowing owl sign were observed during the 2006 survey. Although the disturbed areas had become dominated by non-native grasses by 2012, there were very few rodent burrows and no burrows suitable for burrowing owl observed in those areas in 2012. No burrowing owls or sign were observed during the 2012 survey, and the site is considered to have a low potential to support burrowing owl.

**Table 1**
**SURVEY INFORMATION**

| DATE | PERSONNEL | SURVEY TYPE |
|---|---|---|
| 12/4/2006 | Shelby Howard | Vegetation mapping and general botanical and zoological surveys |
| 6/23/2008 | Stacy Nigro | Jurisdictional delineation |
| | Jasmine Watts | Rare plant survey |
| 6/26/2008 | Doug Allen | Coastal California gnatcatcher survey #1 |
| 7/3/2008 | Debbie Leonard Permit # TE778195 | Coastal California gnatcatcher survey #2 |
| 7/10/2008 | Doug Allen | Coastal California gnatcatcher survey #3 |
| 6/7/2012 | George Aldridge | Vegetation mapping and general biological survey |
| 12/11/2012 | Jason Kurnow Permit # TE778195 | Coastal California gnatcatcher survey #1 |
| 12/20/2012 | Jason Kurnow | Coastal California gnatcatcher survey #2 |
| 12/31/2012 | Jason Kurnow | Coastal California gnatcatcher survey #3 |

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# Regional Location Map

ORCHARD HILLS

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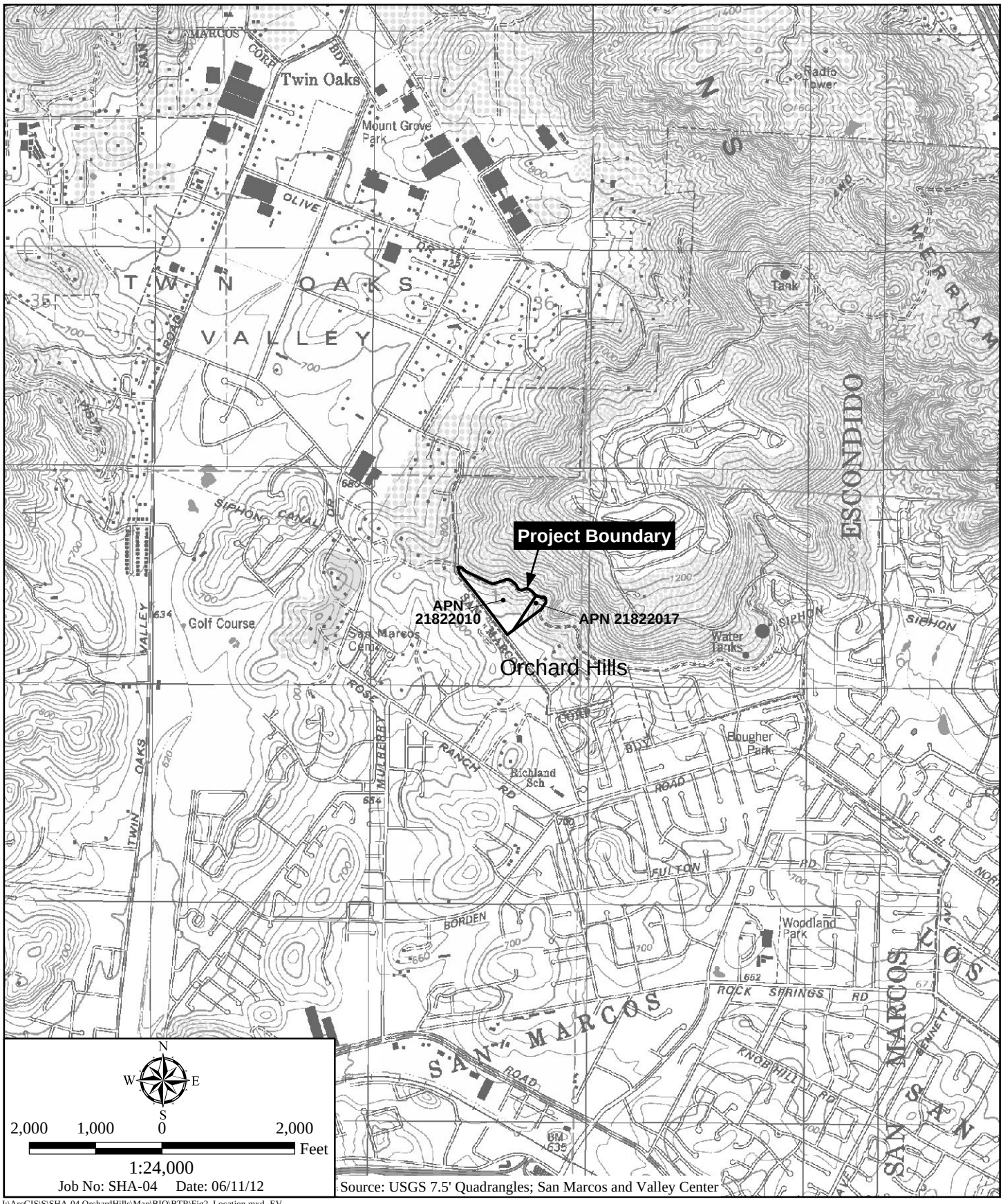
Figure 1

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# Project Location Map

ORCHARD HILLS

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Figure 2

### 1.3.3 Focused Species Surveys

Focused surveys were performed for coastal California gnatcatcher (*Polioptila californica californica*) and rare plants.

#### Coastal California Gnatcatcher

A focused protocol survey for the coastal California gnatcatcher was performed in June and July 2008 by HELIX biologists Doug Allen and Deborah Leonard (U.S. Fish and Wildlife Service [USFWS] Permit TE778195), and again in December 2012 by HELIX biologist Jason Kurnow (USFWS Permit TE778195). These surveys were performed according to protocol established for this species (USFWS 1997). Each survey consisted of 3 site visits (Table 1) wherein coastal sage scrub vegetation was surveyed on foot. Binoculars were used as necessary. Taped gnatcatcher vocalizations were played at infrequent intervals to elicit a response in otherwise undetected birds. These vocalizations were played only sparingly to prevent disrupting normal behavior to the extent possible.

#### Rare Plants

HELIX biologist Jasmine Watts conducted a rare plant survey of the site on June 23, 2008. The entire site was surveyed on foot and all habitat areas were inspected for the presence of rare plant species. Any rare plants that were observed were mapped on a 1"=200' scale topographic map of the site. The entire site was surveyed on foot and rare plant surveys were repeated on June 7, 2012. A comprehensive, updated list of all plant species observed was compiled. The locations of sensitive species recorded in 2008 were confirmed, and no other sensitive species were observed. No significant changes in site conditions that would increase the amount or quality of habitat for sensitive plant species occurred between 2008 and 2012.

### 1.3.4 Jurisdictional Delineation

Prior to beginning fieldwork, aerial photographs (1"=200' scale), USGS topographic maps, and soil survey maps were reviewed to determine the location of potential jurisdictional areas that may be affected by the project. Data were collected in areas that were suspected to be jurisdictional habitats on June 23, 2008, by HELIX biologist Stacy Nigro.

#### USACE Jurisdictional Areas

U.S. Army Corps of Engineers (USACE) wetland boundaries were determined using 3 criteria (vegetation, hydrology, and soils) established for wetland delineations, as described within the Wetlands Delineation Manual (Environmental Laboratory 1987) and Arid West Regional Supplement (USACE 2006). Other references included memoranda (USACE and EPA 2007; Grumbles and Woodley 2007) that helped clarify the wetland manual and recent court decisions.

All potential wetlands areas were surveyed. If an area was suspected of being a wetland, vegetation and hydrology indicators were noted and soil was sampled and described. The area was then determined to be a federal (USACE) wetland if it satisfied all 3 wetland criteria.

Areas were determined to be non-wetland Waters of the U.S. if there was evidence of regular surface flow (e.g., bed and bank) but neither vegetation nor soils criterion was met. Jurisdictional limits for these areas were defined by the ordinary high water mark (OHWM), which is defined in 33 CFR Section 329.11 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 the soil; destruction of terrestrial vegetation; the presence of litter or debris; or other appropriate means that consider the characteristics of the surrounding areas." The USACE has issued further guidance on the OHWM (Riley 2005), which was also used for the delineation.

**CDFW Jurisdictional Areas**

California Department of Fish and Wildlife (CDFW) jurisdictional boundaries were determined based on the presence of riparian vegetation or regular surface flow. Streambeds within CDFW jurisdiction were delineated based on the definition of streambed as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supporting fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports riparian vegetation" (Title 14, Section 1.72). This definition for CDFW jurisdictional habitat allows for a wide variety of habitat types to be jurisdictional, including some that do not include wetland species (e.g., oak woodland and alluvial fan sage scrub). The CDFW jurisdictional habitat includes all riparian shrub or tree canopy that may extend beyond the banks of a stream.

**County Resource Protection Ordinance Wetlands**

Areas were considered County wetlands if they met one of the three following attributes pursuant to the Resource Protection Ordinance (RPO): (1) at least periodically, the land supports a predominance of hydrophytes (plants whose habitat is water or very wet places); (2) the substratum is predominantly undrained hydric soil; or (3) an ephemeral or perennial stream is present, whose substratum is predominately non-soil and such lands contribute substantially to the biological functions or values of wetlands in the drainage system.

### 1.3.5 Nomenclature

Nomenclature used in this report comes from Holland (1986) and Oberbauer (2005) for vegetation communities, Baldwin *et al.* (2012) for plants, Emmel and Emmel (1973) for butterflies, Collins and Taggart (2002) for amphibians and reptiles, and American Ornithologists' Union (2007) for birds. Plant species status is taken from the CNPS (2008), and animal species status is taken from the CDFW CNDDB (2008). Sensitive plant species' habitat information is from Reiser (2001).

## 1.4 ENVIRONMENTAL SETTING

The site is primarily covered by non-native annual grasses and abandoned (planted) immature eucalyptus groves. Natural features within the vicinity of the project site include the Merriam Mountains to the northeast. Surrounding land uses consist of Richland Road and single-family

homes to the west, vacant land to the north and east, and paddock associated with a home to the south of the project site (Figure 3). In addition, a pump station is located immediately off site near the intersection of Richland Road, and the Vista Canal is located along the northeastern portion of the site.

The site slopes generally to the southwest toward Richland Road, with the steepest slopes in the east corner. Four soil types occur within the project site: Escondido very fine sandy loam (EsD2; 9 to 15 percent slopes, eroded); Wyman loam (WmC; 5 to 9 percent slopes); Las Posas fine sandy loam (LpD2; 9 to 15 percent slopes, eroded); and Las Posas stony fine sandy loam (LrG; 30 to 65 percent slopes, eroded; Bowman 1973). Elevations on site range from 780 to 860 feet above mean sea level.

### 1.4.1 Regional Context

As stated above, the North County MSCP designation for most of this site is Existing Agriculture outside the PAMA, and for a portion of it is Existing Agriculture Important for Preserve Design. The site supports very little undisturbed native vegetation, except in the eastern corner, which is separated from the adjacent contiguous area of undisturbed native habitat by the Vista Canal.

### 1.4.2 Habitat Types/Vegetation Communities

Five vegetation communities occur on site: Diegan coastal sage scrub (including disturbed; DCSS), non-native grassland (NNG), eucalyptus woodland (EW), disturbed habitat (DH), and developed land (DEV; Figure 4; Table 2).

**Table 2**
**EXISTING VEGETATION COMMUNITIES/HABITATS**

| VEGETATION COMMUNITY/HABITAT* | ACRE(S) |
|---|---|
| **Moderate Sensitivity** | |
| Diegan coastal sage scrub (including disturbed; 32500) | 2.8 |
| **Low Sensitivity** | |
| Non-native grassland (42200) | 5.9 |
| **Other** | |
| Eucalyptus woodland (11100) | 2.4 |
| Disturbed habitat (11300) | 0.6 |
| Developed (12000) | 0.8 |
| **TOTAL** | **12.5** |

*Vegetation categories and numerical codes are from Oberbauer (2005)

**Diegan Coastal Sage Scrub (including disturbed; DCSS)**

Although it has been greatly reduced from its historical distribution (Oberbauer 1991), Diegan coastal sage scrub is one of the major shrub communities in southern California that occupies xeric sites with shallow soils. Dominated by drought-deciduous shrubs with shallow root systems and open canopies, coastal sage scrub communities often contain a substantial herbaceous component. Diegan coastal sage scrub occurs in coastal southern California from Los Angeles County into northwestern Baja California, Mexico (Baja; Holland 1986), where it supports a number of threatened, endangered, and rare vascular plants, as well as several bird and reptile species that are candidates for federal listing.

The project site supports 2.8 acres of Diegan coastal sage scrub (including disturbed), which occurs in the eastern and north-central portions of the site. Disturbed DCSS (Figure 4) includes some areas in which sparse and depauperate DCSS occurs under a canopy of immature planted eucalyptus. Although tree cover is not natural for DCSS, the density of DCSS shrubs in this area is likely sufficient to provide some habitat potential for animal species that typically utilize DCSS. Dominant plant species within this vegetation community include California sagebrush (*Artemisia californica*), coyote brush (*Baccharis pilularis*), and black sage (*Salvia mellifera*).

**Non-native Grassland (NNG)**

Non-native grassland is a dense to sparse cover of annual grasses, often associated with native annual forbs. This association occurs on gradual slopes with deep, fine-textured, usually clay soils. Most of the annual introduced species that compose NNG originated in the Mediterranean region of Europe, an area with a climate similar to that in California and a long history of agriculture. These two factors have contributed to the successful invasion and establishment of these species and the replacement of native perennial grasslands with annual non-native grassland (Jackson 1985).

Non-native grassland occurs over most of the project site including essentially all areas mapped as disturbed in 2006. Some of this area was recently mowed at the time of the 2012 survey, but the remaining cut vegetation consisted mostly of annual grasses, and very few forbs. Typical invasive species such as oats (*Avena* spp.), foxtail chess (*Bromus madritensis* ssp. *rubens*), fennel (*Foeniculum vulgare*), star thistle (*Centaurea melitensis*), and black mustard (*Brassica nigra*) are common within the NNG on site. Because most of the non-native grassland on the site is of recent origin, having been in a disturbed condition in 2006, this community consisted almost entirely of the ruderal species listed above. This vegetation community covers approximately 5.9 acres of the site.

**Eucalyptus Woodland (EW)**

Much of the site is covered by abandoned, immature eucalyptus (*Eucalyptus* spp.) trees of various species. These trees may have been planted to harvest the branches for flower arrangements. Native shrubs and forbs occur in the understory of some of these groves, though at a very low density. The dominant understory in these groves, with the exception of the areas


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# Aerial Photograph

ORCHARD HILLS

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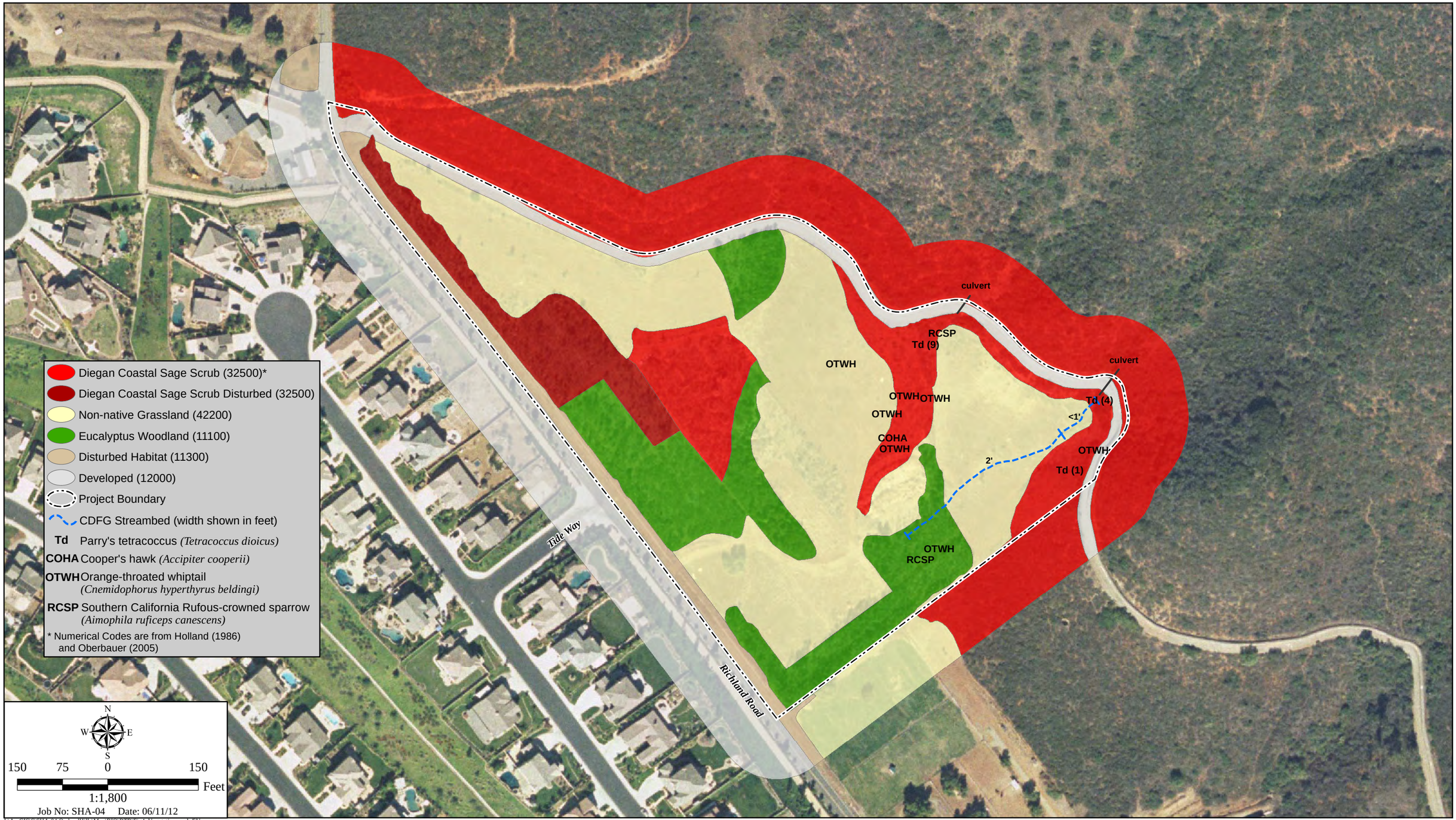
Figure 3

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# Vegetation Communities and Sensitive Resources

ORCHARD HILLS

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Figure 4

noted above as disturbed DCSS, is non-native annual grasses, mustards, and Crete hedypnois (*Hedypnois cretica*). A total of 2.4 acres of EW occurs on site.

**Disturbed Habitat**

Disturbed habitat comprises lands recently graded, cleared of vegetation (e.g., dirt roads), or so impacted by human or stock activity as to no longer support any native or naturalized plant species assemblage, while still retaining a soil substrate. Such areas covered predominantly by non-native grasses are considered NNG, while those dominated by non-native ruderal forbs are considered DH. On site, disturbed habitat covers only a narrow strip along the shoulder of Richland Road, which totals approximately 0.6 acre.

**Developed Land**

Developed land exists where permanent structures and/or pavement have been placed (preventing the growth of vegetation) or where landscaping is clearly tended and maintained. Approximately 0.8 acre of developed land occurs within the project site and consists of the Vista Canal.

### 1.4.3 Flora

A total of 81 plant species were observed on site during surveys (Appendix A). The most common species on the site are non-natives, including eucalyptus, oats, brome grasses, Crete hedypnois, and mustards.

### 1.4.4 Fauna

A total of 38 animal species were recorded on site during surveys: 8 invertebrate, 3 reptile, 24 bird, and 3 mammal species (Appendix B).

### 1.4.5 Sensitive Plant Species

One sensitive plant species (Parry's tetracoccus [*Tetracoccus dioicus*]), was observed on site (Figure 4) and is discussed below. Sensitive plant species with the potential to occur on site were assessed based on known distribution, habitat requirements, and existing site conditions (Appendix C). Status codes are explained in Appendix D. A completed CNDDB form for this species is included in Appendix E.

**Parry's tetracoccus (*Tetracoccus dioicus*)**
**Listing**: --/--; CNPS List 1B.2; County Group A
**Distribution**: Riverside and San Diego counties; Baja California, Mexico (Baja)
**Habitat**: Gabbro soils in low-growing chamise chaparral and sage scrub. Usually, conditions are quite xeric with only limited annual growth.
**Status on site**: Fourteen individuals observed within Diegan coastal sage scrub in the eastern portion of the site (Figure 4) in 2008. This species was observed in the same portion of the site in 2012.

### 1.4.6 Sensitive Animal Species

No federal or state listed animal species were observed or detected on site. Protocol surveys for coastal California gnatcatcher were negative in 2008 and 2012. Three sensitive animal species were observed or detected on site: orange-throated whiptail (*Cnemidophorus hyperythrus beldingi*), Cooper's hawk (*Accipiter cooperii*), and southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*). These species are discussed below. In addition, sensitive animal species not observed/detected on site were analyzed for potential to occur within the project boundaries (Appendix C). Status codes are explained in Appendix D. Completed CNDDB forms for sensitive animal species tracked by CNDDB and observed/detected on site are included Appendix E.

**Orange-throated whiptail (*Cnemidophorus hyperythrus beldingi*)**
**Listing**: --/SSC; County Group 2
**Distribution**: Southern Orange and southern San Bernardino counties south to the cape of Baja
**Habitat**: Coastal sage scrub, chaparral, edges of riparian woodlands, and washes. Also found in weedy, disturbed areas adjacent to these habitats. Important habitat requirements include open sunny and shaded areas with an abundant invertebrate prey base, particularly termites (*Reticulitermes* sp.).
**Status on site**: Several observed in the eastern portion of the site (Figure 4)

**Cooper's hawk (*Accipiter cooperii*)**
**Listing**: Nesting; --/WL; County Group 1
**Distribution**: Throughout the continental U.S., excluding Alaska and parts of both Montana and the Dakotas. Winters south to Mexico and Honduras.
**Habitat**: In San Diego County, tends to inhabit lowland riparian areas and oak woodlands in proximity to suitable foraging areas, such as scrublands or fields
**Status on site**: One observed within Diegan coastal sage scrub on site (Figure 4) in 2006; not observed in 2012.

**Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)**
**Status**: --/WL; County Group 1
**Distribution**: Observed throughout coastal lowlands and foothills of San Diego County
**Habitat(s)**: Coastal sage scrub and open chaparral as well as shrubby grasslands
**Status on site**: Observed/detected in 2 locations in the eastern portion of the site (Figure 4) in 2006 and detected in the same area in 2012.

### 1.4.7 Wetlands/Jurisdictional Waters

No USACE jurisdictional areas or RPO wetlands occur on site. One CDFW jurisdictional streambed totaling 0.02 acre (397 linear feet) occurs in the eastern portion of the site.

### 1.4.8 Habitat Connectivity and Wildlife Corridors

Wildlife corridors can be local or regional in scale and may function in different ways depending on species and time of year. They represent areas where wildlife movement is concentrated due

to natural or manmade constraints. Local corridors provide access to resources such as food, water, and shelter. Animals can use these corridors, such as hillsides and tributary drainages to main drainages, to travel among different habitats (i.e., riparian and upland habitats). Some animals require riparian habitat for breeding and upland habitat for burrowing. Regional corridors provide these functions and link two or more large areas of open space. They provide avenues for wildlife dispersal, for migration and for contact between otherwise distinct populations.

The project site is immediately adjacent to the cities of San Marcos and Escondido (Figure 3). The City of San Marcos is to the southwest and west of the site and is developed adjacent to the site. The City of Escondido is to the north and east of the site and consists of undeveloped native habitat adjacent to the site. As stated above, natural features within the vicinity of the project site include the Merriam Mountains to the northeast. The Merriam Mountains Resource Conservation Area (RCA) provides high quality wildlife habitat and is part of a regional wildlife corridor connecting with Daley Ranch and Rancho Guejito via Moosa Canyon and the slopes above Jesmond Dene. The project site itself is largely disturbed, is separated from the Merriam Mountains RCA by the Vista Canal and its associated access road, is bounded on the other two sides by existing development, and thus contributes little to the function of that wildlife corridor.

## 1.5 APPLICABLE REGULATIONS

Biological resources are subject to regulatory review by the federal government, State of California, and County as discussed below.

### 1.5.1 Federal Government

Administered by the USFWS, the federal Endangered Species Act (ESA) provides the legal framework for the listing and protection of species (and their habitats) identified as being endangered or threatened with extinction. Actions that jeopardize endangered or threatened species and the habitats upon which they rely are considered a "take" under the ESA. Section 9(a) of the ESA defines take as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." "Harm" and "harass" are further defined in federal regulations and case law to include actions that adversely impair or disrupt a listed species' behavioral patterns.

The USFWS identifies critical habitat for endangered and threatened species. Critical habitat is defined as areas of land considered necessary for endangered or threatened species to recover. The ultimate goal is to restore healthy populations of listed species within their native habitat so they can be removed from the list of threatened or endangered species. Once an area is designated as critical habitat pursuant to the federal ESA, all federal agencies must consult with the USFWS to ensure that any action they authorize, fund, or carry out is not likely to result in destruction or adverse modification of the critical habitat. No critical habitat for any species occurs on site.

Section 4(d) of the federal ESA regulates actions that could jeopardize endangered or threatened species. A special rule under Section 4(d) of the ESA was finalized which authorizes "take" of

certain protected species under approved Natural Communities Conservation Programs (NCCPs), which are administered by the states. Because the project is outside the MSCP, removal of Diegan coastal sage scrub, which is the primary habitat of the federally threatened coastal California gnatcatcher, would require that a Habitat Loss Permit (HLP) be obtained from the County via the USFWS pursuant to the 4(d) rule of federal ESA for potential take of the coastal California gnatcatcher.

All migratory bird species native to the United States or its territories are protected under the federal Migratory Bird Treaty Act (MBTA), as amended under the Migratory Bird Treaty Reform Act of 2004 (FR Doc. 05-5127). The MBTA is generally protective of migratory birds but does not actually stipulate the type of protection required. In common practice, the MBTA is now used to place restrictions on disturbance of active bird nests during the nesting season (generally January 15 to August 31). In addition, the USFWS commonly places restrictions on disturbances allowed near active raptor nests. Commonly, construction activities are precluded within a minimum 300 feet of an active bird nest.

Federal wetland regulation (non-marine issues) is guided by the Rivers and Harbors Act of 1899 and the Clean Water Act (CWA). The Rivers and Harbors Act deals primarily with discharges into navigable waters, while the purpose of the CWA is to restore and maintain the chemical, physical, and biological integrity of all Waters of the U.S. Permitting for projects filling Waters of the U.S. (including wetlands) is overseen by the USACE under Section 404 of the CWA. In addition, when a Section 404 permit is required, a CWA Section 401 Water Quality Certification is also required from the Regional Water Quality Control Board (RWQCB). No CWA Section 404 or 401 permits would be required for the proposed project as no USACE jurisdictional areas occur on site. For projects not requiring a Section 401 Water Quality Certification, the RWQCB may elect to regulate Waters of the State under the Porter-Cologne Act.

### 1.5.2 State of California

The California Fish and Game Code regulate species listed as threatened or endangered under the California ESA. The California ESA is similar to the federal ESA in that it contains a process for listing of species and regulating potential impacts to listed species. Section 2081 of the California ESA authorizes CDFW to enter into a memorandum of agreement for take of listed species for scientific, educational, or management purposes. In addition, areas that are enrolled in the NCCP program, but do not have adopted NCCP Plans, are subject to the state's NCCP Guidelines (CDFG 1997). Because Diegan coastal sage scrub would be impacted by the proposed project, the project applicant would be required to demonstrate conformance with the NCCP Guidelines for coastal sage scrub protection.

California's NCCP focuses largely on conserving large areas of coastal sage scrub and the habitats that link those areas. The County is preparing a regional conservation plan for northern San Diego County, the North County MSCP, but it has not been adopted. Therefore, take of coastal sage scrub is expected to be granted under the federal ESA Section 4(d) process with the requirement of conformance with the NCCP Guidelines (CDFG 1997). The following is an evaluation of the on-site coastal sage scrub pursuant to the NCCP Guidelines flowchart:

*Is natural vegetation present?*
Yes. Natural land supporting Diegan coastal sage scrub occurs on site.

*Is coastal sage scrub present?*
Yes. Approximately 2.8 acres of Diegan coastal sage scrub (including disturbed) occur on site.

*Is coastal sage scrub the most dense coastal sage scrub in subregion?*
No. Larger, denser areas of coastal sage scrub occur immediately off site to the east and north of the site across the Vista Canal.

*Is land close to Higher Value District?*
Yes. The project site is adjacent to a large patch of existing habitat and is approximately 1 mile to the southwest of the Merriam Mountains RCA.

As a result, according to the NCCP Guidelines flowchart, the site is considered to have an intermediate potential for long-term conservation. Therefore, project impacts to coastal sage scrub habitat would require mitigation at a 2:1 ratio.

The Native Plant Protection Act (NPPA) enacted a process by which plants are listed as rare or endangered. The NPPA regulates collection, transport, and commerce in listed plants. The California ESA followed NPPA and covers both plants and animals determined to be endangered or threatened with extinction. Plants listed as rare under NPPA were designated rare under the California ESA.

The California Fish and Game Code (Sections 1600 *et seq*.) requires an agreement with CDFW for projects affecting riparian and wetland habitats through issuance of a Streambed Alteration Agreement. It is assumed that the project would require a CDFW 1602 Streambed Alteration Agreement.

CEQA and its implementing guidelines (State CEQA Guidelines) require that discretionary projects be reviewed in accordance with its provisions. Mitigation for significant impacts to the environment is determined through the CEQA environmental review process in accordance with existing laws and regulations.

### 1.5.3 County of San Diego

The County regulates natural resources (among other resources) via the RPO, the regulations of which cover wetlands, sensitive plants and animals, sensitive habitats, and habitats containing sensitive animals or plants as sensitive biological resources. Sensitive habitat lands are identified by the RPO as lands that contain "unique vegetation communities and/or the habitat that is either necessary to support a viable population of sensitive species, is critical to the proper functioning of a balanced natural ecosystem or which serves as a functioning wildlife corridor. Habitats considered sensitive or significant under CEQA are not necessarily considered RPO sensitive habitat lands." It is the intent of the RPO to increase the preservation and protection of the County's unique topography, natural beauty, biological diversity, and natural and cultural resources.

# 2.0 PROJECT EFFECTS

Direct impacts are immediate impacts resulting from the permanent removal of habitat. Direct impacts were quantified by overlaying the limits of all project grading and fuel management zones on the biological resources map of the site for the proposed project. Indirect impacts are all actions that are not direct removal of habitat, but affect the surrounding biological resources either as a secondary effect of the direct impacts or as the cause of degradation of a biological resource over time. Projects can have a wide variety of indirect impacts depending on the nature of the project such as edge effects, animal behavioral changes, and errant construction. Cumulative impacts are those caused by numerous projects in the region and their additive effect of multiple direct and indirect impacts to biological resources over time.

## 2.1 SPECIAL STATUS SPECIES

No listed sensitive plant or animal species were observed or detected on site. Protocol surveys for coastal California gnatcatcher in 2008 and 2012 were negative. One sensitive plant species (Parry's tetracoccus) and 3 sensitive animal species (orange-throated whiptail, Cooper's hawk, and southern California rufous-crowned sparrow) were observed/detected on site. The site is considered to have low potential for burrowing owl due to low numbers of prey, lack of suitable burrows, and the poor quality of most of the non-native grassland on the site, which has only recently developed in formerly disturbed areas.

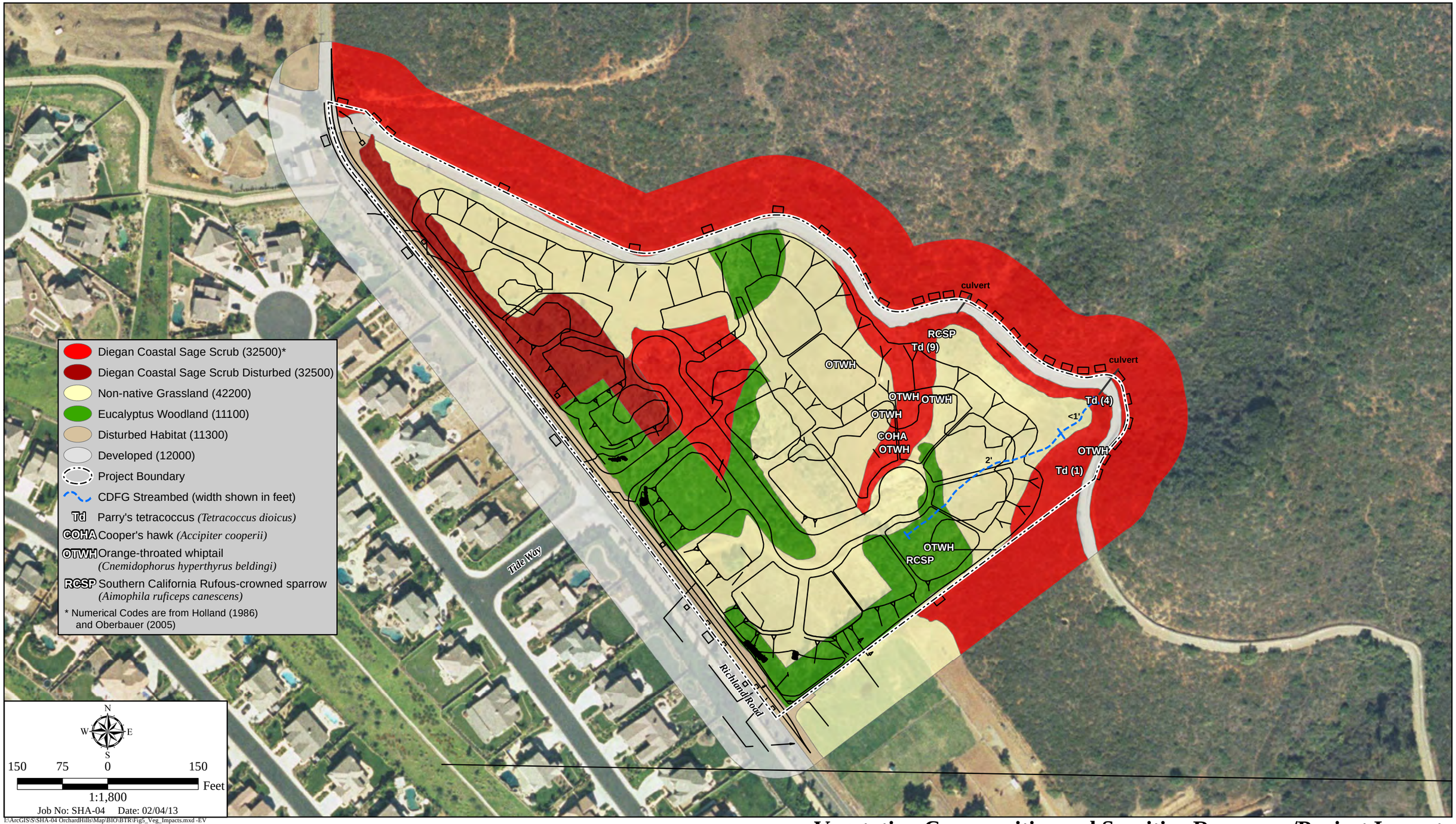
Implementation of the proposed project would result in the loss of raptor foraging habitat as well as the habitat of orange-throated whiptail and southern California rufous-crowned sparrow (Figure 5). Fourteen individuals of Parry's tetracoccus occur within Diegan coastal sage scrub that will be impacted in the western portions of the project site.

## 2.2 RIPARIAN HABITAT OR SENSITIVE NATURAL COMMUNITY

The proposed project would result in direct and indirect impacts to 8.7 acres of sensitive habitat including 2.8 acres of Diegan coastal sage scrub (including disturbed) and 5.9 acres of non-native grassland (Table 2; Figure 5). Direct impacts would result from grading and brush management. The remainder of the site would be placed under control of the Homeowners' Association and would not be preserved in a biological open space easement. As a result, all areas not impacted by grading or brush management would be considered indirectly impacted.

## 2.3 JURISDICTIONAL WETLANDS AND WATERWAYS

As stated above, no USACE jurisdictional areas or RPO wetlands occur on site; therefore no impacts would occur. Implementation of the proposed project would result in direct impacts to 0.01 acre of CDFW jurisdictional streambed. Because the remainder of the site would not be placed in a biological open space easement, but would be placed under control of the Homeowners' Association, the remainder of the streambed (0.01 acre) would be considered indirectly affected. Therefore, impacts to CDFW jurisdictional areas would total 0.02 acre.

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# Vegetation Communities and Sensitive Resources/Project Impacts

ORCHARD HILLS

HELIX Environmental Planning

Figure 5

### 2.4 WILDLIFE MOVEMENT AND NURSERY SITES

As discussed above, the project site is primarily disturbed or supports an abandoned (planted) immature eucalyptus grove. Developed land occurs to the south and west, while undeveloped land occurs to the north and east. Given the disturbed nature of the site, the likelihood of the site acting as a local or regional corridor is very low. Therefore, no impacts would occur to existing wildlife corridors as a result of project implementation.

## 3.0 SPECIAL STATUS SPECIES

### 3.1 GUIDELINES FOR THE DETERMINATION OF SIGNIFICANCE

*Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the USFWS or CDFW?*

Any of the following conditions would be considered significant if:

A. The project would impact one or more individuals of a species listed as federally or state endangered or threatened.

B. The project would impact the survival of a local population of any County Group A or B plant species, or a County Group 1 animal species, or a species listed as a State Species of Special Concern.

C. The project would impact the regional long-term survival of a County Group C or D plant species or a County Group 2 animal species.

D. The project may impact arroyo toad aestivation or breeding habitat.

E. The project would impact golden eagle habitat.

F. The project would result in a loss of functional foraging habitat for raptors.

G. The project would impact the viability of a core wildlife area.

H. The project would cause indirect impacts to proposed or existing open space likely to harm sensitive species over the long term.

I. The project would impact occupied burrowing owl habitat.

J. The project would impact occupied coastal cactus wren habitat or formerly occupied coastal cactus wren habitat that has been burned by fire.

K. The project would impact occupied Hermes copper habitat

L. The project would impact nesting success of sensitive bird (as listed in Section 4.1 of the Guidelines for Determining Significance) through grading, clearing, fire fuel modification, and/or noise generating activities such as construction.

## 3.2 ANALYSIS OF PROJECT EFFECTS

The following project effects would be considered significant because one or more of the following guidelines would be met:

3.1.B Implementation of the proposed project would directly impact locations where Cooper's hawk and southern California rufous-crowned sparrow (Group 1 animal species) were observed/detected. These impacts, however, would not impact the survival of local populations of these species as avian species are able to disperse from the impact area. In addition, a total of 14 individuals of Parry's tetracoccus (*Tetracoccus dioica*; Group A plant species) occur within low quality Diegan coastal sage scrub that will be impacted as a result of the proposed project (Figure 5). A substantial population of approximately 40 individuals of this species were observed off-site, further to the east of the Vista Canal, within lands presumed be a part of or adjacent to the Merriam Mountains RCA. Additional individuals are suspected to occur within the off-site habitat further to the east, although surveys have not been completed off site to verify. Although project impacts are not expected to have a substantial effect on the local or regional population, the impacts would be considered significant in light of CEQA and the County Guidelines.

3.1.L Noise from such sources as clearing and grading could result in an impact to wildlife. Noise-related impacts would be considered significant if sensitive species (such as raptors) were displaced from their nests and failed to breed. Raptors or other sensitive bird species nesting within any area impacted by noise exceeding 60 dB or ambient could be significantly impacted. If tree-nesting raptors are present within 500 feet of the impact area, effects resulting from construction noise would be significant according to County Guidelines 3.1.L.

The proposed project would not result in significant impacts under the above guidelines for the following reasons:

3.1.A No species listed as federally or state endangered or threatened were observed or detected within the project site would be affected by the project's implementation. Under County Guideline 3.1.A, no significant impact would occur.

3.1.C Implementation of the proposed project would directly impact locations where the orange-throated whiptail (Group 2 animal species) was observed/detected. While impacts to this sensitive species would be potentially adverse to the local population, the impacts would not affect the regional long-term survival of these species. Under County Guidelines 3.1.C, no significant impact would occur.

3.1.D The site does not support arroyo toad aestivation or breeding habitat. Under County Guideline 3.1.D, no significant impact would occur.

3.1.E No golden eagle habitat occurs within the project boundary; therefore, no impacts to golden eagle habitat would occur. Under County Guideline 3.1.E, no significant impact would occur.

3.1.F Raptor species (e.g., Cooper's hawk) use non-native grassland as well as open shrub lands (i.e., Diegan coastal sage scrub) for foraging. Additionally, raptors nest in eucalyptus woodlands, such as those found on site, although no nests were detected during any surveys of the site. Implementation of the proposed project would directly impact 2.0 acres of Diegan coastal sage scrub (including disturbed) and 4.9 acres of non-native grassland (Figure 5; Table 3). As such, impacts to functional foraging habitat would total 6.9 acres and would not have an adverse effect on the regional long term survival of any raptor species given the abundance of open space immediately east of the project site. Therefore, impacts to raptor foraging habitat would be considered less than significant under County Guideline 3.1.F.

3.1.G The project site is not a part of a core wildlife area and is characterized by disturbed or non-native habitats. As a result, project implementation would not impact the viability of core wildlife areas. Under County Guideline 3.1.H, no significant impact would occur.

3.1.H The proposed project is residential in nature, so domestic predators (namely cats) may be introduced to the surrounding habitat. Although such introductions have potential to harm native wildlife species, the project site is adjacent to residential development on two sides, so the impact of domestic predators is not anticipated to increase substantially above the current level. The Vista Canal and its access road lie between the proposed subdivision and the core habitat areas in the Merriam Mountain RCA, already providing a linear access route for human incursion along the edge of that natural area while at the same time serving as a boundary between that natural area and the proposed development. Consequently, human incursion into the open space east of the canal is not likely to increase. The proposed development lies down slope from the core habitat area, so no drainage from it can enter the natural area. The proposed development will leave the eastern corner of the project site undeveloped, providing a buffer for night lighting between houses and core habitat areas. As a result, no significant impact under County Guideline 3.1.H would occur.

3.1.I The project site does not support burrowing owl habitat, nor were burrowing owls, burrowing owl sign, or potentially occupied burrows detected during the nine biological surveys and site visits conducted in 2006, 2008, and 2012, of which five occurred during the burrowing owl breeding season. The directed habitat assessment surveys conducted in 2006 and 2012 further confirmed the absence of suitable conditions on the site that would warrant additional burrowing owl surveys. The site is considered to have low potential for burrowing owl and the species would not be expected to occupy the site. No significant impact under County Guideline 3.1.I would occur.

3.1.J The project site does not support coastal cactus wren habitat, nor any former coastal cactus wren habitat altered by fire. No significant impact under County Guideline 3.1.J would occur.

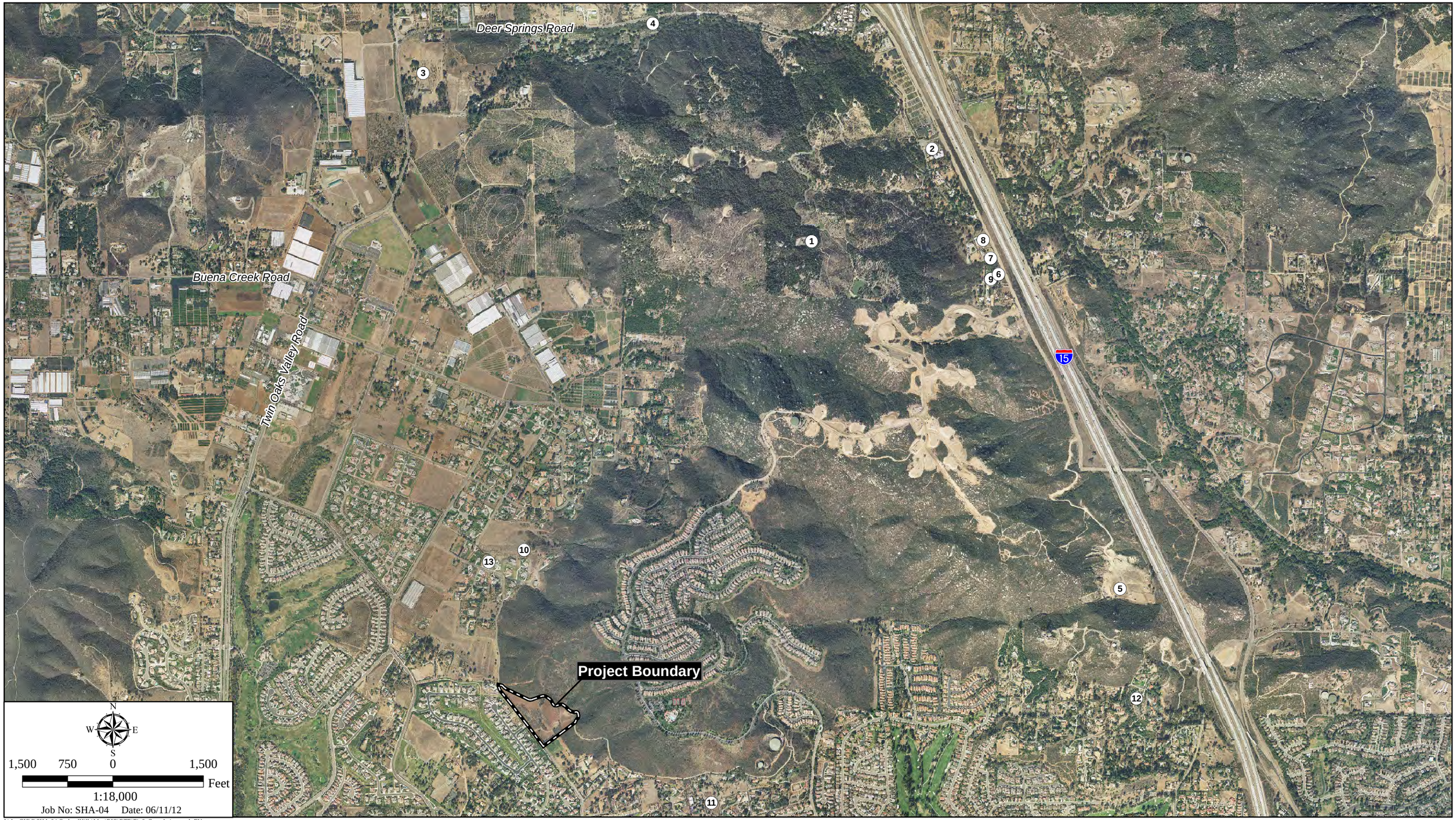
3.1.K The project site does not support occupied Hermes copper habitat. No significant impact under County Guideline 3.1.K would occur.

## 3.3 CUMULATIVE IMPACT ANALYSIS

Although individual environmental effects of a project may be determined to be insignificant when analyzed separately, the additive effect when viewed in connection with impacts of past projects, present, and future projects may cause the significant loss or degradation of a resource.

The cumulative project study area was based on sensitive resources found on site and how they related to similar resources both locally and regionally. The cumulative study area is encompassed by Interstate 15 to the east, State Route 76 to the south, Twin Oaks Valley Road to the west, and Deer Springs Road to the north.

A total of 14 projects were reviewed for this cumulative analysis in addition to the proposed project (Figure 6; Table 3). Six of the 14 projects are inactive (Whitewater Canyon [5 permits] and Lantis), and one is pending withdrawal by the applicant (Matheson). One project is a permit application for an oversized structure that has already been built on a lot developed as a horse ranch (Parker), and two projects involve agricultural land (Hartman). Of the remaining four projects, one involves repurposing of an existing structure and construction of a pet kennel less than 0.1 acre in size (Dougherty). One project is a legacy Major Use Permit for the County operated Ramona Landfill. The two remaining projects (Knox and ADJ Holdings) did not specify any impacts to biological resources in County documents.

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# Cumulative Projects

ORCHARD HILLS

HELIX Environmental Planning

Figure 6

**Table 3**
**CUMULATIVE BIOLOGICAL RESOURCES IMPACTS**

| Map Reference No. | Project Name | Permit Number | Riparian/Wetlands | | Diegan Coastal Sage Scrub | | Non-native Grassland | | Raptors | | Sensitive Plants | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Impacts | Mitigation | Impacts | Mitigation | Impacts | Mitigation | Impacts | Mitigation | Impacts | Mitigation |
| 1 | Knox | TPM 20879 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2 | ADJ Holdings | STP 08-015 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3 | Whitewater Canyon* | SP 95-002 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4 | Whitewater Canyon* | SP 95-002 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 5 | Whitewater Canyon* | SP 95-002 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 6 | Whitewater Canyon* | SP 95-002 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 7 | Whitewater Canyon* | SP 95-002 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 8 | Hartman/STP /Easy Turf Storage Bldg | STP 07-041 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | Hartman AD Lot Clearing | AD 07-057 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | Ramona Landfill | MUP 92-001 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | Matheson 2 Lot† | TPM 21173 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

**Table 3** (cont.)
**CUMULATIVE BIOLOGICAL RESOURCES IMPACTS**

| Map Reference No. | Project Name | Permit Number | Riparian/Wetlands | | Diegan Coastal Sage Scrub | | Non-native Grassland | | Raptors | | Sensitive Plants | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Impacts | Mitigation | Impacts | Mitigation | Impacts | Mitigation | Impacts | Mitigation | Impacts | Mitigation |
| 12 | Parker Oversized Barn | AD 10-041 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | Lantis* | STP 01-045 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 14 | Dougherty Pet Resort | MUP 10-027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Proposed Project | Orchard Hills | | 0.02 | 0.02 | 1.2 | 2.4 | 1.0 | 0.5 | Y | Y | 0 | 0 |
| **TOTAL** | | | 0.02 | 0.02 | 1.2 | 2.4 | 1.0 | 0.5 | Y | Y | 0 | 0 |

NA=No information available; NQ=Impact identified, but not quantified in County files; Y=Impact identified
*Permit Inactive; †Application Pending Withdrawal

## 3.4 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

*Impact 3.4.1* Construction-related noise may significantly impact sensitive bird species that may be nesting within an area such that construction noise at the nest exceeds 60 dB.

*Mitigation Measure (MM) 3.4.1*

No grubbing, clearing, or grading within 500 feet of active tree-nesting raptor (i.e., Cooper's hawk) habitat (January 15 to July 15) shall occur. As such, all grading permits, improvement plans, and the final map shall state the same. If grubbing, clearing, or grading would occur during the raptor breeding season, a pre-construction survey shall be conducted to determine if these species occur within the areas impacted by noise. If there are no raptors nesting (includes nest building or other breeding/nesting behavior) within this area, development shall be allowed to proceed. However, if raptors are observed nesting or displaying breeding/nesting behavior within the area, construction shall (1) be postponed until all nesting (or breeding/nesting behavior) has ceased or until after July 15; or (2) a temporary noise barrier or berm shall be constructed at the edge of the development footprint to ensure that noise levels are reduced to below 60 dB or ambient. Alternatively, the use of construction equipment could be scheduled to keep noise levels below 60 dB or ambient in lieu of or in concert with a wall or other noise barrier.

*Impact 3.4.2* The project would result in the unavoidable loss of 14 individuals of Parry's tetracoccus, which is a County Group A sensitive plant species. These impacts would be considered significant.

*MM 3.4.2* The applicant shall mitigate impacts to Parry's tetracoccus at a 2:1 ratio (i.e., two individuals provided as mitigation for every one individual impacted) in accordance with one or a combination of the following measures:

a) Acquisition and preservation of occupied habitat located at an approved off-site location in the region, such as lands not currently preserved, but contiguous with, the Merriam Mountains Resource Conservation Area to the immediate north and east of the project site;
b) Planting of Parry's tetracoccus container stock and salvage and translocation of impacted Parry's tetracoccus individuals to an approved off-site location in the region, such as existing preserve lands located within, or lands not currently preserved, but contiguous with, the Merriam Mountains Resource Conservation Area to the immediate north and east of the project site; and/or
c) Purchase of credits from an approved mitigation bank in the region demonstrated to support occupied Parry's tetracoccus habitat, which could include the Daley Ranch Mitigation Bank located in the City of Escondido approximately five miles east of the project site or the Red Mountain Mitigation Bank located in the unincorporated community of Fallbrook approximately 15 miles north of the project site.

### 3.4.1 Plant Species

Impacts to 14 individuals of Parry's tetraccocus, a County Group A sensitive plant species, will be reduced to a less than significant level through the implementation of one or a combination of the measures described in *MM* 3.4.2.

### 3.4.2 Animal Species

Possible indirect impacts to Cooper's hawk and rufous-crowned sparrow will be reduced to below significance by noise attenuation measures described in *MM* 3.4.1. Impacts to orange-throated whiptail are considered not-significant because the proposed project includes only a small, peripheral fraction of the suitable habitat available to this species in and adjacent to the project site.

## 3.5 CONCLUSIONS

Implementation of the proposed project would indirectly impact 1 sensitive plant species, and 3 sensitive animal species as a result of noise. If implemented, the recommended mitigation measure would reduce this impact to below a level of significance.

# 4.0 RIPARIAN HABITAT OR SENSITIVE NATURAL COMMUNITY

## 4.1 GUIDELINES FOR THE DETERMINATION OF SIGNIFICANCE

*Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the USFWS or CDFW?*

Any of the following conditions would be considered significant if:

A. Project-related construction, grading, clearing, construction or other activities would temporarily or permanently remove sensitive native or naturalized habitat (as listed in Table 5 in the County Biological Guidelines, excluding those without a mitigation ratio) on or off the project site.

B. Any of the following will occur to or within jurisdictional wetlands and/or riparian habitats as defined by the USACE, CDFW, and County: removal of vegetation; grading; obstruction or diversion of water flow; adverse change in velocity, siltation, volume of flow, or runoff rate; placement of fill; placement of structures; construction of a road crossing; placement of culverts or other underground piping; any disturbance of the substratum; and/or any activity that may cause an adverse change in native species composition, diversity, and abundance.

C. The project would draw down the groundwater table to the detriment of groundwater-dependent habitat, typically a drop of 3 feet or more from historical low groundwater levels.

D. The project would increase human access or competition from domestic animals, pests, or exotic species to levels proven to adversely affect sensitive habitats.

E. The project does not include a wetland buffer adequate to protect the functions and values of existing wetlands.

## 4.2 ANALYSIS OF PROJECT EFFECTS

The following project effects would be considered significant because one or more of the following guidelines would be met:

4.1.A Project implementation would result in direct and indirect impacts to 2.0 acres of Diegan coastal sage scrub (including disturbed) and 4.9 acres of non-native grassland. Although the project includes an area identified as open space, this area would not be preserved in a biological open space easement but would be placed under control of the Homeowners' Association and would therefore be considered indirectly impacted. These impacts would be considered significant because County Guideline 4.1.A would be met.

4.1.B As discussed in Section 2.3, implementation of the proposed project would result in impacts to 0.02 acre of CDFW jurisdictional streambed (Figure 5). These impacts would be a significant according to County Guideline 4.1.B.

The proposed project would not result in significant impacts under the above guidelines for the following reasons:

4.1.C No groundwater withdrawal or other activities that could lower of the groundwater table are proposed. Under County Guideline 4.1.C, no significant impact would occur.

4.1.D Project implementation would result in development of 24 single-family residential lots and 4 utility/road lots adjacent to undeveloped habitat with connectivity to the Merriam Mountains RCA. Given that the areas to the south and west are largely developed, the proposed project would essentially fill in an existing disturbed lot. The addition of 24 single family residences would not substantially increase human access to the adjacent habitat. Residents of the proposed development may introduce domestic animals to the surrounding habitat. Domestic pets (particularly cats) are effective predators on native animals. While cat-proof fencing is infeasible, the rural setting of the project and expected abundance of coyotes in the RCA may reduce the effects of cat intrusion to a minimum and would discourage residents from keeping indoor-outdoor cats. As a result, under County Guideline 4.1.D, no significant impact would occur.

4.1.E No wetland buffers would be required for the proposed project, as no County RPO wetlands occur on site. Therefore, under County Guideline 4.1.E, no significant impact would occur.

## 4.3 CUMULATIVE IMPACT ANALYSIS

No projects within the cumulative study area other than the proposed project would impact Diegan coastal sage scrub, non-native grassland, riparian areas, or raptors. The proposed project's impacts to Diegan coastal sage scrub and non-native grassland, while significant at the project level, would be fully mitigated by purchase of mitigation credits at an approved mitigation bank (see below) and are small enough to be not cumulatively considerable or significant, given other proposed development in the area.

## 4.4 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

*Impact 4.4.1a through c*

The proposed project would directly and indirectly impact 2.8 acres of Diegan coastal sage scrub (including disturbed), and 5.9 acres of non-native grassland

*MM 4.4.1a* Mitigation for impacts to Diegan coastal sage scrub (including disturbed) shall occur at a 2:1 ratio (Table 4) through purchase of 5.6 acres of Diegan coastal sage scrub credits from an approved mitigation bank in consultation with the County and resource agencies prior to issuance of grading permit.

*MM 4.4.1b* Mitigation for impacts to non-native grassland shall occur at a 0.5:1 ratio (Table 4) through purchase of 2.95 acres of non-native grassland credits from the Daley Ranch or another approved mitigation bank in consultation with the County and resource agencies prior to issuance of grading permit.

*MM 4.4.1c* Temporary construction staking or fencing shall be erected under the supervision of a qualified biologist at or outside the edge of the impact areas where they interface with natural areas. This fencing shall be erected prior to commencement of grubbing or grading activities and shall demarcate areas where human and equipment access and disturbance from grading are prohibited. All site preparation and grading activities near these interfaces shall be monitored by a qualified biologist during construction or extraction activities. Staging areas shall be restricted to approved impact areas only.

*Impact 4.4.2* The proposed project would directly and indirectly impact 0.02 acre of CDFW jurisdictional streambed.

*MM 4.4.2* Impacts to CDFW jurisdictional streambed shall be mitigated at a 1:1 ratio (Table 4) through purchase of 0.02 acre of mitigation credits through consultation with the CDFW prior to issuance of grading permit.

Implementation of MM 4.4.1a through c and MM 4.4.2 would mitigate for impacts to sensitive habitat lands.

### 4.5 CONCLUSIONS

Implementation of the proposed project would result in significant impacts to sensitive natural communities including jurisdictional areas; however, mitigation measures for loss of habitat resulting from implementation of the potential project would reduce impact to below a level of significance. Mitigation includes purchase of credits at an approved mitigation bank at ratios consistent with those required by the County and resource agencies.

## 5.0 JURISDICTIONAL WETLANDS AND WATERWAYS

### 5.1 GUIDELINES FOR THE DETERMINATION OF SIGNIFICANCE

*Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

### 5.2 ANALYSIS OF PROJECT EFFECTS

As previously stated in Sections 2.4 and 4.2, implementation of the proposed project would not result in impacts to USACE jurisdictional areas, as none occur on site.

### 5.3 CUMULATIVE IMPACT ANALYSIS

No project-related cumulative impacts would occur to USACE jurisdictional areas, as none occur on site.

### 5.4 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

No impacts to USACE jurisdictional areas would occur; therefore, no mitigation is required.

### 5.5 CONCLUSIONS

Implementation of the proposed project would not result in a significant impact to USACE jurisdictional areas as none occur on site.

## 6.0 WILDLIFE MOVEMENT AND NURSERY SITES

### 6.1 GUIDELINES FOR THE DETERMINATION OF SIGNIFICANCE

*Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

Any of the following conditions would be considered significant if:

A. The project would prevent wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction.

B. The project would substantially interfere with connectivity between blocks of habitat, or would potentially block or substantially interfere with a local or regional wildlife corridor or linkage.

C. The project would create artificial wildlife corridors that do not follow natural movement patterns.

D. The project would increase noise and/or nighttime lighting in a wildlife corridor or linkage to levels proven to affect the behavior of the animals identified in a site-specific analysis of wildlife movement.

E. The project does not maintain an adequate width for an existing wildlife corridor or linkage and/or would further constrain an already narrow corridor through activities such as (but not limited to) reduction of corridor width, removal of available vegetative cover, placement of incompatible uses adjacent to it, and placement of barriers in the movement path.

F. The project does not maintain adequate visual continuity (i.e., long lines-of-site) within wildlife corridors or linkage.

## 6.2 ANALYSIS OF PROJECT EFFECTS

The following project effects would be considered significant because one or more of the following guidelines would be met:

6.1.D Noise from such sources as clearing and grading could result in an impact to wildlife. Noise-related impacts would be considered significant if sensitive species (such as raptors) were displaced from their nests and failed to breed. Raptors or other sensitive bird species nesting within any area impacted by noise exceeding 60 dB or ambient could be significantly impacted. If tree-nesting raptors are present within 500 feet of the impact area, effects resulting from construction noise would be significant according to County Guideline 6.1.D.

The project site is largely disturbed, but does support a small area of Diegan coastal sage scrub and eucalyptus woodland that could be used as breeding habitat for native wildlife; however, the site has habitat connectivity with the Merriam Mountains RCA to the northeast. Impacts to wildlife movement and nursery sites would be less than significant under the above guidelines for the following reasons:

6.1.A Given the relatively low quality of the habitat on site for breeding or foraging by tree nesting birds and the presence of developed land to the south and west, the project would not prevent wildlife access to the higher quality habitat to the east. The proposed project

would not result in significant impacts to wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction. Under County Guideline 6.1.A, no significant impact would occur.

6.1.B As discussed in Section 1.4.8, the project site is adjacent to habitat connected with the Merriam Mountains RCA, which is part of a regional wildlife corridor providing avenues of wildlife movement to Daley Ranch via Moosa Canyon and the hills above Jesmond Dene. However, the project site itself is characterized by disturbed or non-native vegetation, and wildlife is unlikely to pass through it due to the adjacent development. Implementation of the proposed project would not restrict wildlife access to the corridor or reduce the value of the habitat within the corridor. As a result, under County Guideline 6.1.B, no significant impact would occur.

6.1.C The project would not create artificial wildlife corridors. The site is already largely disturbed, so its development would not affect wildlife movement. Moreover, the project proposes to leave native habitat in the eastern portion of the site, adjacent to the existing large block of habitat in the Merriam Mountains. As a result, any existing corridors would not be substantially altered. As a result, under County Guideline 6.1.B, no significant impact would occur.

6.1.D All proposed project-related lighting would be required to adhere to Division 9 of the San Diego County Light Pollution Code. Lighting within the proposed development area adjacent to preserved habitat would be of the lowest illumination allowed for human safety, selectively placed, shielded, and directed away from preserved habitat. Under County Guideline 6.1.D, no significant impact resulting from lighting would occur.

6.1.E The project would not reduce an existing wildlife corridor or linkage, or further constrain an already narrow wildlife corridor. As previously stated, the proposed project would not alter the regional wildlife corridor within the nearby Merriam Mountains RCA. Under County Guideline 6.1.E, no significant impact would occur.

6.1.F The project would not affect visual continuity within wildlife corridors or linkages. The project site lies at the western edge of a large contiguous area of native habitat, between that area and an existing residential street and subdivision. Thus, no continuous habitat corridor or linkage spans the project site. Under County Guideline 6.1.F, no significant impact would occur.

## 6.3 CUMULATIVE IMPACT ANALYSIS

As stated in Section 3.3, the cumulative biological projects impacts study area is encompassed by Interstate 15 to the east, State Route 76 to the south, Twin Oaks Valley Road to the west, and Deer Springs Road to the north. The wildlife corridor function of the nearby Merriam Mountains RCA would not be impacted upon implementation of the proposed project. As a result, the proposed project would not contribute to cumulative impacts to wildlife corridors.

The proposed project would impact potential raptor nesting habitat, but would not impact potential nursery sites for other species. The proposed project is on the periphery of the habitat within the Merriam Mountains RCA. Consequently, the habitat that would be impacted by this project is largely of marginal quality for raptors. Additionally, all impacted raptor habitat within the cumulative study area would be mitigated to below a level of significance. As a result, cumulative impacts to wildlife nursery sites would be less than significant.

### 6.4 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

Implementation of MM 3.4.1 would mitigate for impacts from noise on sensitive animal species.

### 6.5 CONCLUSIONS

Implementation of the proposed project would not result in significant impacts to wildlife movement with implementation of the mitigation measure.

## 7.0 LOCAL POLICIES, ORDINANCES, AND ADOPTED PLANS

### 7.1 GUIDELINES FOR THE DETERMINATION OF SIGNIFICANCE

*Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? Would the project conflict with the provisions of an adopted Habitat Conservation Plan (HCP), NCCP plan, or other approved local, regional or state habitat conservation plan?*

Any of the following conditions would be considered significant if:

A. For lands outside of the MSCP, the project would impact coastal sage scrub vegetation in excess of the County's 5 percent habitat loss threshold as defined by the Southern California Coastal Sage Scrub NCCP Guidelines.

B. The project would preclude or prevent the preparation of the subregional NCCP.

C. The project will impact any amount of wetlands or sensitive habitat lands as outlined in the RPO.

D. The project would not minimize and/or mitigate coastal sage scrub habitat loss in accordance with Section 4.3 of the NCCP Guidelines.

E. The project does not conform to goals and requirements outlined in any applicable Habitat Conservation Plan, Habitat Management Plan, Special Area Management Plan, Watershed Plan, or similar regional planning effort.

F. For lands within the MSCP, the project would not minimize impacts to Biological Resource Core Areas, as defined in the Biological Mitigation Ordinance (BMO).

G. The project would preclude connectivity between areas of high habitat values, as defined by the Southern California Coastal Sage Scrub NCCP Guidelines.

H. The project does not maintain existing movement corridors and/or habitat linkages as defined by the BMO.

I. The project does not avoid impacts to MSCP narrow endemic species and would impact core populations of narrow endemics.

J. The project would reduce the likelihood of survival and recovery of listed species in the wild.

K. The project would result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs (MBTA).

L. The project would result in the take of eagles, eagle eggs, or any part of an eagle (Bald and Golden Eagle Protection Act).

## 7.2 ANALYSIS OF PROJECT EFFECTS

The proposed project would not result in significant impacts under the above guidelines for the following reasons:

7.1.A The project site lies outside the boundaries of the County's MSCP, but is within the boundary for the proposed North County MSCP. Because implementation of the proposed project would impact Diegan coastal sage scrub, a HLP from the County pursuant to the Section 4(d) rule of federal ESA for potential take of the coastal California gnatcatcher would be required. Implementation of the proposed project, however, would not impact coastal sage scrub vegetation in excess of the County's 5 percent habitat loss threshold. Therefore, under County County Guideline 7.1.A, no significant impact would occur.

7.1.B The proposed project site is characterized primarily by non-native grassland and eucalyptus woodland, with lesser amounts of disturbed habitat and Diegan coastal sage scrub. The proposed North County MSCP designation for most of this site is Existing Agriculture Outside the PAMA, and for a portion of it is Exiting Agriculture Important for Preserve Design. The proposed development footprint will affect the portions of the site dominated by non-native vegetation and disturbance, and avoid the eastern corner which contains native habitat. Development of the site would not preclude or prevent the preparation of the subregional NCCP. Under County Guideline 7.1.B, no significant impact would occur.

7.1.C None of the habitat types or vegetation communities on the project site qualify as Sensitive Habitat Lands under the RPO. Therefore, no significant impact under County Guideline 7.1.C would occur.

7.1.D The proposed project includes mitigation measures to fully offset impacts to Diegan coastal sage scrub. A Habitat Loss Permit will be required, and appropriate findings made in accordance with the NCCP for mitigation of impacts to coastal California gnatcatcher and its habitat. These findings must be accepted by the County, USFWS, and CDFW. Proposed mitigation for impacts to coastal California gnatcatcher habitat includes mitigating impacts to 2.8 acres of Diegan coastal sage scrub at 2:1 offsite, for a total of 5.6 acres. Therefore, under County Guideline 7.1.D, no significant impact would occur.

7.1.E The proposed project would conform to goals and requirements outlined in any applicable Habitat Conservation Plan, RMP, Special Area Management Plan, Watershed Plan, or similar regional planning effort. Under County Guideline 7.1.E, no significant impact would occur.

7.1.F The project site is outside the County's MSCP Subarea Plan and is therefore not subject to the BMO. Under County Guideline 7.1.F, no significant impact would occur.

7.1.G The proposed project would not preclude connectivity between areas of high habitat values. The project site is bordered on only one side by native habitat, and on the other two by existing development. On the one side adjacent to native habitat, the project site is separated from native habitat by a concrete canal and gravel road. Thus, the project site does not connect any area of native habitat to any other, and exists as a peripheral addendum to a contiguous area of native habitat. Under County Guideline 7.1.G, no significant impact would occur.

7.1.H As discussed in Section 1.4.8, the project site contributes little to the function of the wildlife movement through the nearby Merriam Mountains RCA, as such project implementation would not alter existing wildlife movement corridors and/or habitat linkages. Under County Guideline 7.1.H, no significant impact would occur.

7.1.I The project would not impact core populations of any narrow endemic species as none were observed or detected within the project site. Under County Guideline 7.1.I, no significant impact would occur.

7.1.J No listed species were observed on the project site. As such, implementation of the proposed project would not reduce the likelihood of survival and recovery of listed species in the wild. Under County Guideline 7.1.J, no significant impact would occur.

7.1.K Implementation of project design measures would ensure compliance with the MBTA. Therefore, the proposed project would not result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs. Under County Guideline 7.1.K, no significant impact would occur.

7.1.L No golden eagle habitat occurs within the project boundary and this species was not observed/detected on site during surveys. As such, implementation of the proposed project would not result in the take of eagles, eagle eggs, or any part of an eagle, as

defined by the Bald and Golden Eagle Protection Act. Under County Guideline 7.1.L, no significant impact would occur.

### 7.3 CUMULATIVE IMPACT ANALYSIS

Each of the cumulative projects listed in Table 3 and discussed above would be required to conform with County Guidelines 7.1.A through 7.1.L and provide mitigation as appropriate. In addition, the proposed project results in less than significant impacts for 11 of the 12 guidelines in Section 7.0. Implementation of mitigation measures would reduce the project-related impacts to sensitive vegetation communities to below a level of significance for County Guideline 7.1.C. As a result, the project's impacts to local policies, ordinances, and adopted plans would not be cumulatively considerable or significant.

### 7.4 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

Implementation of MM 4.4.1a through c would mitigate for impacts to sensitive habitat lands.

### 7.5 CONCLUSIONS

With implementation of the mitigation measure described above, impacts to local policies, ordinances, and adopted plans would be reduced to below a level of significance.

## 8.0 SUMMARY OF PROJECT IMPACTS AND MITIGATION

Implementation of the proposed project would result in significant impacts to special status species, natural communities, and local policies.

Impacts to 3 sensitive animal species (orange-throated whiptail, Cooper's hawk, and southern California rufous-crowned sparrow), although potentially adverse to local populations, would not affect the regional long-term survival of these species and are not considered significant. Impacts to 14 individuals of Parry's tetracoccus would be considered significant and require mitigation at a 2:1 ratio. Mitigation for impacts to Parry's tetracoccus through implementation of one or a combination of the measures proposed within *MM 3.4.2* would reduce the impact to this species to below the level of significance.

Construction noise could have a significant effect on sensitive animal species. Avoidance of grubbing and grading during the breeding season and, if warranted, pre-construction surveys would reduce these impacts to below a level of significance.

Implementation of the proposed project would result in significant impacts to 2 sensitive vegetation communities: Diegan coastal sage scrub (including disturbed) and non-native grassland (Table 4). These impacts would be reduced to below a level of significance through purchase of 5.6 acres of Diegan coastal sage scrub credits and 2.95 acres of non-native grassland credits from the Daley Ranch or another approved mitigation bank in consultation with the County and resource agencies. Additionally, 0.02 acre of CDFW jurisdictional streambed would

be impacted. Impacts to CDFW jurisdictional streambed also would be mitigated through purchase of appropriate mitigation credits from an approved mitigation bank.

**Table 4**
**SUMMARY OF VEGETATION COMMUNITIES, IMPACT, AND MITIGATION FOR THE ORCHARD HILLS PROJECT**

| VEGETATION COMMUNITY/HABITAT | EXISTING | TOTAL IMPACTS | MITIGATION | | |
|---|---|---|---|---|---|
| | | | Ratio | Required | Provided Off-site |
| **Moderate Sensitivity** | | | | | |
| Diegan coastal sage scrub (including disturbed; 32500) | 2.8 | 2.8 | 2:1 | 5.6 | 5.6 |
| **Low Sensitivity** | | | | | |
| Non-native grassland (42200) | 5.9 | 5.9 | 0.5:1 | 2.95 | 2.95 |
| **Other** | | | | | |
| Eucalyptus woodland (11100) | 2.4 | 3.9 | -- | 0.0 | 0.0 |
| Disturbed habitat (11300) | 0.6 | 5.6 | -- | 0.0 | 0.0 |
| Developed (12000) | 0.8 | 0.0 | -- | 0.0 | 0.0 |
| **TOTAL** | **12.5** | **12.5** | **--** | **8.55** | **8.55** |
| **CDFW Jurisdictional Areas** | | | | | |
| Streambeds† | 0.02 | 0.02 | 1:1 | 0.02 | 0.02 |

*Vegetation categories and numerical codes are from Oberbauer (2005)
†CDFW jurisdictional streambeds overlap areas mapped as Diegan coastal sage scrub, eucalyptus woodland, and disturbed habitat; as such, impacts to streambeds are treated separately from the vegetation communities

Implementation of the mitigation measures will reduce impacts to sensitive biological resources to below a level of significance (Table 5).

| Table 5<br>SUMMARY OF MITIGATION MEASURES FOR THE ORCHARD HILLS PROJECT | | |
|---|---|---|
| **Proposed Mitigation** | **Level of Significance After Mitigation** | **Guideline Number(s)** |
| *Mitigation for impacts to 14 individuals of Parry's tetracoccus shall occur at a ratio of 2:1 through implementation of one or a combination of the following measures: (a) Acquisition and preservation of occupied habitat located at an approved off-site location in the region; (b) Planting of Parry's tetracoccus container stock and salvage and translocation of impacted Parry's tetracoccus individuals to an approved off-site location in the region; and/or (c) Purchase of credits from an approved mitigation bank in the region demonstrated to support occupied Parry's tetracoccus habitat.* | Not significant | 3.1.B |
| *No grubbing, clearing, or grading within 500 feet of active tree-nesting raptor (i.e., Cooper's hawk) habitat (January 15 to July 15) shall occur.* As such, all grading permits, improvement plans, and the final map shall state the same. If grubbing, clearing, or grading would occur during the raptor breeding season, a pre-construction survey shall be conducted to determine if these species occur within the areas impacted by noise. If there are no raptors nesting (includes nest building or other breeding/nesting behavior) within this area, development shall be allowed to proceed. However, if raptors are observed nesting or displaying breeding/nesting behavior within the area, construction shall (1) be postponed until all nesting (or breeding/nesting behavior) has ceased or until after July 15; or (2) a temporary noise barrier or berm shall be constructed at the edge of the development footprint to ensure that noise levels are reduced to below 60 dB or ambient. Alternatively, the use of construction equipment could be scheduled to keep noise levels below 60 dB or ambient in lieu of or in concert with a wall or other noise barrier. | Not significant | 3.1.L |

| **Table 5** (cont.)<br>**SUMMARY OF MITIGATION MEASURES FOR THE ORCHARD HILLS PROJECT** | | |
|---|---|---|
| **Proposed Mitigation** | **Level of Significance After Mitigation** | **Guideline Number(s)** |
| *Mitigation for impacts to Diegan coastal sage scrub (including disturbed) shall occur at a 2:1 ratio through purchase of 5.6 acres of Diegan coastal sage scrub credits from the Daley Ranch or another approved mitigation bank in consultation with the County and resource agencies prior to issuance of grading permit.* | Not significant | 4.1.A |
| *Mitigation for impacts to non-native grassland shall occur at a 0.5:1 ratio (Table 4) through purchase of 2.95 acres of non-native grassland credits from the Daley Ranch or another approved mitigation bank in consultation with the County and resource agencies prior to issuance of grading permit.* | Not significant | 4.1.A |
| *Temporary construction staking or fencing shall be erected under the supervision of a qualified biologist at or outside the edge of the impact areas where they interface with natural areas.* This fencing shall be erected prior to commencement of grubbing or grading activities and shall demarcate areas where human and equipment access and disturbance from grading are prohibited. All site preparation and grading activities near these interfaces shall be monitored by a qualified biologist during construction or extraction activities. Staging areas shall be restricted to approved impact areas only. | Not significant | 4.1.A |
| *Impacts to CDFW jurisdictional streambed shall be mitigated at a 1:1 ratio through purchase of 0.02 acre of mitigation credits through consultation with the CDFW prior to issuance of grading permit.* | Not significant | 4.1.B |

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# Appendix A

# PLANT SPECIES OBSERVED

**Appendix A**
**PLANT SPECIES OBSERVED – ORCHARD HILLS**

| FAMILY | SCIENTIFIC NAME | COMMON NAME | HABITAT(S)‡ |
|---|---|---|---|
| **DICOTS** | | | |
| Aizoaceae | *Carpobrotus edulis** | hottentot-fig | DH |
| Anacardiaceae | *Malosma laurina* | laurel sumac | DCSS, NNG |
| | *Rhus ovata* | sugar bush | DCSS |
| | *Schinus molle** | Peruvian peppertree | NNG |
| Apiaceae | *Foeniculum vulgare** | fennel | DCSS, EW, NNG |
| Apocynaceae | *Asclepias fascicularis* | narrow-leaf milkweed | DCSS |
| Asteraceae | *Artemisia californica* | California sagebrush | DCSS, EW |
| | *Baccharis pilularis* | coyote brush | DCSS, EW |
| | *Baccharis sarothroides* | broom baccharis | DCSS |
| | *Carduus pycnocephalus** | Italian thistle | NNG |
| | *Centaurea melitensis** | star thistle | DCSS, EW, NNG |
| | *Conyza canadensis* | horseweed | DCSS |
| | *Corethrogyne filaginifolia* | California-aster | NNG |
| | *Deinandra fasciculata* | fascicled tarplant | DCSS, NNG |
| | *Encelia californica* | California encelia | DCSS, NNG |
| | *Eriophyllum confertiflorum* | golden-yarrow | DCSS |
| | *Hazardia squarrosa* var. *grindelioides* | saw-toothed goldenbush | DCSS, EW |
| | *Hedypnois cretica** | Crete hedypnois | DCSS, DH, EW, NNG |
| | *Helianthus annuus* | western sunflower | NNG |
| | *Helianthus gracilentus* | slender sunflower | DCSS, NNG |
| | *Heterotheca grandiflora* | telegraph weed | DCSS |
| | *Heterotheca grandiflora* | telegraph weed | DCSS |
| | *Isocoma menziesii* var. *menziesii* | San Diego goldenbush | NNG |
| | *Lactuca serriola** | wild lettuce | EW, NNG |
| | *Picris echioides** | bristly ox-tongue | EW |
| | *Silybum marianum** | milk thistle | DCSS |
| | *Sonchus asper** | prickly sow thistle | EW, NNG |
| | *Stephanomeria* sp. | wreath-plant | NNG |
| | *Stephanomeria exigua* | small wreath-plant | DCSS |
| Boraginaceae | *Amsinckia* sp. | fiddleneck | DCSS |
| | *Eriodictyon crassifolium* | felt-leaved yerba santa | DCSS |
| | *Eriodictyon trichocalyx* var. *trichocalyx* | yerba santa | DCSS |
| | *Phacelia* sp. | phacelia | DCSS |
| Brassicaceae | *Brassica* sp* | mustard | EW, NNG |
| | *Brassica nigra** | black mustard | EW, NNG |
| Caprifoliaceae | *Sambucus mexicana* | blue elderberry | EW |
| Caryophyllaceae | *Silene gallica** | common catchfly | NNG |
| Chenopodiaceae | *Chenopodium* sp.* | goosefoot, glasswort | NNG |
| | *Salsola tragus** | Russian thistle | DH, DCSS |

**Appendix A** (cont.)
**PLANT SPECIES OBSERVED – ORCHARD HILLS**

| FAMILY | SCIENTIFIC NAME | COMMON NAME | HABITAT(S)‡ |
|---|---|---|---|
| **DICOTS** (cont.) | | | |
| Convolvulaceae | *Convolvulus* sp. | morning-glory | NNG |
| Euphorbiaceae | *Euphorbia albomarginata** | rattlesnake weed | NNG |
| | *Euphorbia peplus** | petty spurge | DCSS |
| Fabaceae | *Acmispon glaber* | coastal deer weed | DCSS, EW |
| | *Melilotus* sp.* | clover | NNG, EW |
| | *Melilotus indicus** | Indian sweet clover | DCSS, EW, NNG |
| Gentianaceae | *Zeltnera venusta* | canchalagua | NNG |
| Geraniaceae | *Erodium botrys** | long-beak filaree | DCSS, NNG |
| Lamiaceae | *Marrubium vulgare** | horehound | DH, EUC |
| | *Salvia columbariae* | chia | DCSS |
| | *Salvia mellifera* | black sage | DCSS, EW, NNG |
| Lythraceae | *Lythrum hyssopifolium** | grass poly | NNG |
| Malvaceae | *Malacothamnus fasciculatus* | chaparral mallow | NNG, DCSS |
| | *Malva parviflora** | cheeseweed | NNG |
| Myrtaceae | *Eucalyptus* sp.* | eucalyptus | DCSS, EW, NNG |
| Phrymaceae | *Mimulus aurantiacus* | bush monkeyflower | DCSS, EW |
| Picrodendraceae | *Tetracoccus dioicus* | Parry's tetracoccus | DCSS |
| Plantaginaceae | *Plantago ovata* | island plantain | DCSS |
| Polygonaceae | *Eriogonum fasciculatum* ssp. *fasciculatum* | California buckwheat | DCSS, EW, NNG |
| | *Rumex crispus** | curly dock | EW, NNG |
| Primulaceae | *Anagallis arvensis** | scarlet pimpernel | NNG |
| Rosaceae | *Heteromeles arbutifolia* | toyon | DCSS |
| Rutaceae | *Cneoridium dumosum* | bushrue | DCSS |
| Simaroubaceae | *Ailanthus altissima** | tree of heaven | NNG |
| **MONOCOTS** | | | |
| Asphodelaceae | *Asphodelus fistulosus** | hollow-stem asphodel | NNG |
| Liliaceae | *Chlorogalum parviflorum* | small-flower soap-plant | DCSS, NNG |
| | *Chlorogalum pomeridianum* | soap plant | NNG |
| Poaceae | *Avena barbata** | slender wild oat | EW, NNG |
| | *Avena fatua** | wild oat | EW, NNG |
| | *Bromus hordeaceus** | soft chess | DCSS, EW, NNG |
| | *Bromus madritensis* ssp. *rubens** | foxtail chess | DCSS, EW, NNG |
| | *Cynodon dactylon** | Bermuda grass | NNG |
| | *Festuca myuros** | fescue | EW, DCSS, NNG |
| | *Festuca perennis** | Italian ryegrass | EW |

**Appendix A** (cont.)
**PLANT SPECIES OBSERVED – ORCHARD HILLS**

**MONOCOTS** (cont.)

| | | | |
|---|---|---|---|
| Poaceae (cont.) | *Muhlenbergia microsperma* | little-seed muhly | DCSS |
| | *Paspalum dilatatum** | dallis grass | NNG |
| | *Pennisetum setaceum** | fountain grass | DCSS, NNG |
| | *Phalaris* sp. | canary grass | EW |
| | *Stipa* sp. | needlegrass | EW |
| | *Stipa lepida* | foothill needlegrass | DCSS, EW |

‡Habitat acronyms: DCSS=Diegan coastal sage scrub; DH=disturbed habitat; EW=eucalyptus woodland; NNG=non-native grassland
*Non-native species
†Sensitive species

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# Appendix B

# ANIMAL SPECIES OBSERVED OR DETECTED

**Appendix B**
**ANIMAL SPECIES OBSERVED OR DETECTED – ORCHARD HILLS**

| **SCIENTIFIC NAME** | **COMMON NAME** |
|---|---|
| **INVERTEBRATES** | |
| Araneae – Spiders | |
| *Agelenidae* sp. | funnel web spider |
| *Theraphosidae* sp. | tarantula |
| Hemiptera – Cicadas, Aphids, Planthoppers, Leafhoppers, and Shield Bugs | |
| *Cicadidae*sp. | cicada |
| Lepidoptera – Butterflies and Moths | |
| *Papilio rutulus* | western tiger swallowtail |
| *Papilio zelicaon* | anise swallowtail |
| *Pieris rapae* | cabbage white |
| *Pontia protodice* | common white |
| Odonata – Dragonflies and Damselflies | |
| *Anisoptera* sp. | dragonfly (red) |
| **VERTEBRATES** | |
| **Reptiles** | |
| Phrynosomatidae – Earless, Spiny, Tree, Side-blotched, and Horned Lizards | |
| *Sceloporus occidentalis* | western fence lizard |
| *Uta stansburiana* | side-blotched lizard |
| Tejidae – Whiptails and Racerunners | |
| *Cnemidophorus hyperythrus beldingi*† | orange-throated whiptail |
| **Birds** | |
| Accipitridae – Hawks, Old World Vultures, Kites, Harriers, and Eagles | |
| *Accipiter cooperii*† | Cooper's hawk |
| *Buteo jamaicensis* | red-tailed hawk |
| Aegithalidae – Bushtit | |
| *Psaltriparus minimus* | bushtit |
| Columbidae – Doves and Pigeons | |
| *Zenaida macroura* | mourning dove |
| Corvidae – Jays, Magpies, and Crows | |
| *Aphelocoma coerulescens* | western scrub jay |
| *Corvus brachyrhynchos* | American crow |
| *Corvus corax* | common raven |
| Emberizidae – Sparrows, Longspurs, and Emberiza Buntings | |
| *Pipilo crissalis* | California towhee |
| *Pipilo maculatus* | spotted towhee |

**Appendix B** (cont.)
**ANIMAL SPECIES OBSERVED OR DETECTED – ORCHARD HILLS**

| **SCIENTIFIC NAME** | **COMMON NAME** |
|---|---|
| **VERTEBRATES** (cont.) | |
| **Birds** (cont.) | |
| Emberizidae (cont.) | |
| *Aimophila ruficeps*† | rufous-crowned sparrow |
| Falconidae – Falcons and Caracaras | |
| *Falco sparverius* | American kestrel |
| Fringillidae – Finches | |
| *Carpodacus mexicanus* | house finch |
| *Carduelis psaltria* | lesser goldfinch |
| Hirundinidae – Swallows | |
| *Petrochelidon pyrrhonota* | cliff swallow |
| Icteridae – Orioles | |
| *Icterus cucullatus* | hooded oriole |
| Mimidae – Mimic Thrushes | |
| *Mimus polyglottos* | northern mockingbird |
| *Toxostoma redivivum* | California thrasher |
| Odontophoridae – Quails and Bobwhite | |
| *Callipepla californica* | California quail |
| Picidae – Woodpeckers | |
| *Picoides nuttallii* | Nuttall's woodpecker |
| Timaliidae – Wrentit | |
| *Chamaea fasciata* | wrentit |
| Trochilidae – Hummingbirds | |
| *Calypte anna* | Anna's hummingbird |
| *Thryomanes bewickii* | Bewick's wren |
| Tyrannidae – Flycatchers | |
| *Sayornis nigricans* | black phoebe |
| *Tyrannus verticalis* | western kingbird |
| **Mammals** | |
| Felidae – Cat family | |
| *Lynx rufus* | bobcat |
| Leporidae – Rabbits and Hares | |
| *Sylvilagus auduboni* | desert cottontail (scat) |
| Sciuridae – Squirrels, Chipmunks, and Marmots | |
| *Spermophilus beecheyi* | California ground squirrel |

†Sensitive species

# Appendix C

# SENSITIVE FLORA AND FAUNA POTENTIAL SPECIES LIST

| Appendix C<br>SENSITIVE FLORA AND FAUNA POTENTIAL SPECIES LIST – ORCHARD HILLS | | | | | |
|---|---|---|---|---|---|
| **Common and Scientific Names** | **Sensitivity Code & Status*** (Federal, State, County, other) | **Habitat Preference/ Requirements** | **Verified on Site** (Yes/No; direct/indirect evidence) | **Potential to Occur on Site** (Observed or L/M/H/U) | **Factual Basis for Determination of Occurrence Potential** |
| **PLANT SPECIES** | | | | | |
| San Diego thorn-mint (*Acanthomintha ilicifolia*) | FT/SE<br>CNPS List 1B.1<br>County Group A<br>County MSCP Narrow Endemic (NE) | Grassy openings in chaparral or sage scrub, or near vernal pools, with friable or broken clay soils are preferred habitat. | No | None | Appropriate habitat does not occur on site. |
| San Diego ambrosia (*Ambrosia pumila*) | FE/--<br>CNPS List 1B.1<br>County Group A | Occurs along riparian scrub or open riparian forest. | No | None | Appropriate habitat does not occur on site. |
| Orcutt's brodiaea (*Brodiaea orcuttii*) | --/--<br>CNPS List 1B.1<br>County Group A<br>County MSCP Covered | Vernally moist grasslands, mima mound topography, and vernal pool periphery preferred habitat. Occasionally grows on streamside embankments. Soils are gravelly loams. | No | None | Appropriate habitat does not occur on site. |
| Prostrate spineflower (*Chorizanthe procumbens*) | --/--<br>CNPS unlisted | Sandy openings in chamise chaparral or recently disturbed sandy areas. | No | Low | Appropriate soils do not occur on the site. |
| Western dichondra (*Dichondra occidentalis*) | --/--<br>CNPS List 4.2<br>County Group D | Dry, sandy banks in coastal sage scrub, chaparral, or southern oak woodland. Often proliferates on recently burned slopes. | No | Low | Very little appropriate habitat occurs on site. |
| Sticky dudleya (*Dudleya viscida*) | --/--<br>CNPS List 1B.2 | Occurs on north-facing slopes in coastal areas. | No | None | 20 known occurrences. Conspicuous species that would have been observed if present. |

| **Appendix C** (cont.)<br>**SENSITIVE FLORA AND FAUNA POTENTIAL SPECIES LIST – ORCHARD HILLS** | | | | | |
|---|---|---|---|---|---|
| **Common and Scientific Names** | **Sensitivity Code & Status*** (Federal, State, County, other) | **Habitat Preference/ Requirements** | **Verified on Site** (Yes/No; direct/indirect evidence) | **Potential to Occur on Site** (Observed or L/M/H/U) | **Factual Basis for Determination of Occurrence Potential** |
| **PLANT SPECIES** (cont.) | | | | | |
| Palmer's goldenbush (*Ericameria palmeri palmeri*) | --/--<br>CNPS List 2.2<br>County Group B<br>County MSCP NE | This sizeable shrub grows along coastal drainages, in mesic chaparral sites, or rarely in Diegan coastal sage scrub. | No | None | Appropriate habitat does not occur on site. Would have been observed if present. |
| Graceful tarplant (*Holocarpha virgata elongata*) | --/--<br>CNPS List 4.2<br>County Group D | Occurs in coastal mesas and foothills with grassland habitats. | No | Low | Grassland on site is heavily disturbed. Conspicuous species that would have been observed if present. |
| Southwestern spiny rush (*Juncus acutus leopoldii*) | --/--<br>CNPS List 4.2<br>County Group D | Moist saline or alkaline soils in coastal and riparian marshes. | No | None | Suitable habitat does not occur on the site. |
| Robinson pepper grass (*Lepidium virginicum robinsonii*) | --/--<br>CNPS List 1B.2<br>County Group A | This annual herb grows in openings in chaparral and sage scrub at the coastal and foothill elevations. Typically observed in relatively dry, exposed locales rather than beneath a shrub canopy or along creeks. | No | Low | Very little appropriate habitat occurs on site. |
| Ashy spikemoss (*Selaginella cinerascens*) | --/--<br>CNPS List 4.1<br>County Group D | Undisturbed openings in sage scrub and chaparral . | No | Moderate | Suitable habitat occurs on the site outside of the proposed project impacts. |
| Bottle liverwort (*Sphaerocarpos drewei*) | --/--<br>CNPS List 1B.1<br>CA Endemic<br>County Sensitive | Occurs in open chaparral and coastal sage scrub | No | Low | Very little appropriate habitat occurs on site. |

| **Appendix C** (cont.)<br>**SENSITIVE FLORA AND FAUNA POTENTIAL SPECIES LIST – ORCHARD HILLS** | | | | | |
|---|---|---|---|---|---|
| **Common and Scientific Names** | **Sensitivity Code & Status*** (Federal, State, County, other) | **Habitat Preference/ Requirements** | **Verified on Site** (Yes/No; direct/indirect evidence) | **Potential to Occur on Site** (Observed or L/M/H/U) | **Factual Basis for Determination of Occurrence Potential** |
| **PLANT SPECIES** (cont.) | | | | | |
| Parry's tetracoccus (*Tetracoccus dioicus*) | --/--<br>CNPS List 1B.2<br>County Group A<br>County MSCP Covered | Occurs on gabbro soils in low growing chamise chaparral and sage scrub. Usually, conditions are quite xeric with only limited annual growth. | Yes | Observed | Observed on site. |
| **ANIMAL SPECIES** | | | | | |
| **Invertebrate** | | | | | |
| Monarch butterfly (*Danaus plexippus*) | --/--<br>County Group 2 | Roosts in wind-protected groves of trees including eucalyptus during winter. Larval host plants are milkweeds. | No | Low | Potential roost sites are present on the site, but not larval host plant species, or water sources. |
| Hermes copper (*Lycaena hermes*) | --/--<br>County Group 1 | Southern mixed chaparral and coastal sage scrub with mature specimens of larval host plant spiny redberry (*Rhamnus crocea*). | No | None | Larval host plant not observed on site. |
| **Fish and Amphibians** | | | | | |
| Arroyo toad (*Bufo californicus*) | FE/SSC<br>County Group 1 | Breeds in slow-moving streams within open-canopy riparian habitats. May be found in upland scrub habitats adjacent to these areas. | No | None | Aquatic habitat does not occur on the site. |
| Arroyo chub (*Gila orcutti*) | --/--<br>County Group 1 | Native to only the San Luis Rey river in San Diego County | No | None | Aquatic habitat does not occur on the site. |

| **Appendix C** (cont.)<br>**SENSITIVE FLORA AND FAUNA POTENTIAL SPECIES LIST – ORCHARD HILLS** | | | | | |
|---|---|---|---|---|---|
| **Common and Scientific Names** | **Sensitivity Code & Status*** (Federal, State, County, other) | **Habitat Preference/ Requirements** | **Verified on Site** (Yes/No; direct/indirect evidence) | **Potential to Occur on Site** (Observed or L/M/H/U) | **Factual Basis for Determination of Occurrence Potential** |
| **ANIMAL SPECIES** (cont.) | | | | | |
| **Fish and Amphibians** (cont.) | | | | | |
| California red-legged frog (*Rana aurora draytoni*) | FT/SSC<br>County Group 1<br>Narrow Endemic | Dense, shrubby riparian vegetation with deep, slow-moving water. | No | None | Suitable habitat does not occur on the site. Possibly extirpated from San Diego County. |
| Western spadefoot toad (*Spea hammondii*) | --/SSC<br>County Group 2 | Open coastal sage scrub, chaparral, and grassland along sandy or gravelly streams, washes, or playas. | No | None | Suitable habitat does not occur on the site. |
| Two-striped garter snake (*Thamnophis hammondii*) | --/SSC<br>County Group 1 | Along permanent or intermittent streams with dense riparian vegetation. Occasionally vernal pools or stock ponds. | No | None | Suitable habitat does not occur on the site. |
| South Coast garter snake (*Thamnophis sirtalis novum*) | --/--<br>County Group 2 | No information is available on this subspecies' ecology. | No | Unknown | |
| **Reptiles** | | | | | |
| Silvery legless lizard (*Anniella pulchra pulchra*) | --/SSC<br>County Group 2 | Loose, sandy soil in oak woodland, chaparral, and desert scrub. | No | Low | Suitable soils do not occur on the site. |
| Belding's orange-throated whiptail (*Cnemidophorus hyperythrus beldingi*) | --/SSC<br>County Group 2 | Occurs in coastal sage scrub and chaparral, particularly washes and other sandy areas with patches of brush and rocks for cover. | Yes | Observed | Observed in several locations on site. |

| **Appendix C** (cont.)<br>**SENSITIVE FLORA AND FAUNA POTENTIAL SPECIES LIST – ORCHARD HILLS** | | | | | |
|---|---|---|---|---|---|
| **Common and Scientific Names** | **Sensitivity Code & Status*** (Federal, State, County, other) | **Habitat Preference/ Requirements** | **Verified on Site** (Yes/No; direct/indirect evidence) | **Potential to Occur on Site** (Observed or L/M/H/U) | **Factual Basis for Determination of Occurrence Potential** |
| **ANIMAL SPECIES** (cont.) | | | | | |
| **Reptiles** (cont.) | | | | | |
| San Diego banded gecko (*Coleonyx 5erodias5s abbotti*) | --/--<br>County Group 1 | Chaparral and coastal sage scrub in areas with rock outcrops | No | Low | Rock outcrops do not occur on site. |
| Coastal rosy boa (*Charina trivirgata roseofusca*) | --/--<br>County Group 2 | Rocky outcrops in sage scrub, chaparral, and desert scrub. | No | Low | Rocky outcrops do not occur on the site. |
| Southwestern pond turtle (*Clemmys marmorata 5erodi*) | --/SSC<br>County Group 1<br>Narrow Endemic | Freshwater marshes, rivers, streams, and ponds. | No | None | Aquatic habitat does not occur on the site. |
| Coastal western whiptail (*Cnemidophorus tigris multiscutatus*) | --/--<br>County Group 2 | Open coastal sage scrub, chaparral, and woodlands. | No | Moderate | Suitable habitat occurs on the site. |
| Red-diamond rattlesnake (*Crotalus ruber*) | --/SSC<br>County Group 2 | Occurs in chaparral, coastal sage scrub, along creek banks, and in rock outcrops or piles of debris with supply of burrowing rodents for prey. | No | Low | Appropriate habitat does not occur on site. |
| San Diego ring-necked snake (*Diadophis punctatus similis*) | --/--<br>County Group 2 | Generally occurs in moist habitats such as oak woodlands and canyon bottoms. | No | Low | Very little appropriate habitat occurs on site. |

| **Appendix C** (cont.)<br>**SENSITIVE FLORA AND FAUNA POTENTIAL SPECIES LIST – ORCHARD HILLS** | | | | | |
|---|---|---|---|---|---|
| **Common and Scientific Names** | **Sensitivity Code & Status*** (Federal, State, County, other) | **Habitat Preference/ Requirements** | **Verified on Site** (Yes/No; direct/indirect evidence) | **Potential to Occur on Site** (Observed or L/M/H/U) | **Factual Basis for Determination of Occurrence Potential** |
| **ANIMAL SPECIES** (cont.) | | | | | |
| **Reptiles** (cont.) | | | | | |
| Coronado skink (*Eumeces skiltonianus interparietalis*) | --/SSC<br>County Group 2 | Under rocks, litter, or debris in coastal sage scrub, chaparral, grasslands, oak woodlands, and coniferous forests. | No | Moderate | Suitable habitat occurs on the site. |
| San Diego horned lizard (*Phrynosoma coronatum blainvillei*) | --/SSC<br>County Group 2 | Frequents a variety of habitats from sage scrub and chaparral to coniferous and broadleaf woodlands. Habitat requirements include open areas for sunning, bushes for cover, fine loose soil for rapid burial, and native ant species such as harvester ants (*Pogonomyrmex* sp.). | No | Low | Very little appropriate habitat occurs on site. |
| Coast patch-nosed snake (*Salvadora hexalepis virgultea*) | --/SSC<br>County Group 2 | Prefers brushy or shrubby vegetation, such as chaparral with low shrub structure of minimum density. | No | Low | Some habitats on site suitable for species. |
| **Birds** | | | | | |
| Sharp-shinned hawk (*Accipiter striatus*) | --/SSC<br>County Group 1 | Usually observed in areas with tall trees or other vegetative cover. | No | Low | Would likely have been observed/detected if present. |
| Bell's sage sparrow (*Amphispiza belli belli*) | BCC/SSC<br>County Group 1 | Occurs in sunny, dry stands of coastal sage scrub and chaparral. | No | Moderate | Would likely have been observed/<br>detected if present. |

| **Appendix C** (cont.)<br>**SENSITIVE FLORA AND FAUNA POTENTIAL SPECIES LIST – ORCHARD HILLS** | | | | | |
|---|---|---|---|---|---|
| **Common and Scientific Names** | **Sensitivity Code & Status*** (Federal, State, County, other) | **Habitat Preference/ Requirements** | **Verified on Site** (Yes/No; direct/indirect evidence) | **Potential to Occur on Site** (Observed or L/M/H/U) | **Factual Basis for Determination of Occurrence Potential** |
| **ANIMAL SPECIES** (cont.) | | | | | |
| **Birds** (cont.) | | | | | |
| Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) | --/WL<br>MSCP Covered<br>County Group 1 | Occurs in coastal sage scrub and open chaparral as well as shrubby grasslands. | Yes | Observed | Observed on site. |
| Cooper's hawk (*Accipiter cooperii*) | --/WL<br>County Group 1 | Tends to inhabit lowland riparian areas and oak woodlands in proximity to suitable foraging areas, such as scrublands or fields | Yes | Observed | One observed perched on site within Diegan coastal sage scrub. |
| Golden eagle (*Aquila chrysaetos*) | Nesting and wintering; BCC, BGEPA/WL, Fully Protected<br>County Group 1 | Forages in grassy and open, shrubby habitats. Nests most often on cliffs, less often in trees. | No | None | Appropriate habitat does not occur on site. |
| Great blue heron (*Ardea 7erodias*) | --/--<br>County Group 2 | Wetland habitats throughout the western United States. | No | None | Suitable habitat does not occur on the site. |
| Burrowing owl (*Athene cunicularia*) | Burrow sites; BCC/SSC<br>County Group 1 | Open areas such as grass-lands, pastures, coastal dunes, desert scrub, and edges of agriculture fields. | No | Low | Little habitat on site is suitable for species. No suitable burrows or sign observed during surveys. |
| Red-shouldered hawk (*Buteo lineatus*) | --/--<br>County Group 1 | Woodlands, orchards, eucalyptus groves, tall trees throughout San Diego County. | No | Moderate | Suitable habitat occurs on the site. A conspicuous species that would have been observed if present. |

| **Appendix C** (cont.)<br>**SENSITIVE FLORA AND FAUNA POTENTIAL SPECIES LIST – ORCHARD HILLS** | | | | | |
|---|---|---|---|---|---|
| **Common and Scientific Names** | **Sensitivity Code & Status*** (Federal, State, County, other) | **Habitat Preference/ Requirements** | **Verified on Site** (Yes/No; direct/indirect evidence) | **Potential to Occur on Site** (Observed or L/M/H/U) | **Factual Basis for Determination of Occurrence Potential** |
| **ANIMAL SPECIES** (cont.) | | | | | |
| **Birds** (cont.) | | | | | |
| Turkey vulture (*Cathartes aura*) | --/--<br>County Group 1 | Foraging habitat includes most open habitats with breeding occurring in crevices among boulders. | No | High | Observed flying overhead off site. |
| Northern harrier (*Circus cyaneus hudsonius*) | --/SSC<br>County Group 1 | Lowlands throughout San Diego County, but occasionally found in foothills, mountains, and deserts. | No | Moderate | Suitable habitat occurs on the site. Conspicuous species that would have been observed if present. |
| Yellow-billed cuckoo (*Coccyzus americanus occidentalis*) | --/SE<br>County Group 1<br>Narrow Endemic | Extensive stands of riparian woodland. | No | None | Suitable habitat does not occur on the site. An extremely rare and sporadic visitor to San Diego County. |
| Yellow warbler (*Dendroica petechia brewsteri*) | --/SSC<br>County Group 2 | Riparian woodland during breeding season, rare in winter. | No | None | Suitable habitat does not occur on the site. |
| White-tailed kite (*Elanus caeruleus*) | --/Fully Protected<br>White-tailed kite | Riparian woodlands and oak or sycamore groves adjacent to grasslands. | No | Moderate | Suitable habitat occurs on the site. Conspicuous species that would have been observed if present. |
| Southwestern willow flycatcher (*Empidonax trailii extimus*) | FE/SE<br>County Group 1<br>Narrow Endemic | Willow thickets and other riparian understory. | No | None | Suitable habitat does not occur on the site. |
| Horned lark (*Eremophila alpestris actis*) | --/WL<br>County Group 2 | Coastal strand, arid grasslands, and sandy desert floors. | No | None | Sandy, arid habitat does not occur on the site. |

| **Appendix C** (cont.)<br>**SENSITIVE FLORA AND FAUNA POTENTIAL SPECIES LIST – ORCHARD HILLS** | | | | | |
|---|---|---|---|---|---|
| **Common and Scientific Names** | **Sensitivity Code & Status*** (Federal, State, County, other) | **Habitat Preference/ Requirements** | **Verified on Site** (Yes/No; direct/indirect evidence) | **Potential to Occur on Site** (Observed or L/M/H/U) | **Factual Basis for Determination of Occurrence Potential** |
| **ANIMAL SPECIES** (cont.) | | | | | |
| **Birds** (cont.) | | | | | |
| Prairie falcon (*Falco mexicanus*) | BCC/WL<br>County Group 1 | Nests on cliffs, ledges, or in old hawk or raven nests. Forages in grasslands or deserts. | No | Low | Suitable nesting sites do not occur on the site. |
| Yellow-breasted chat (*Icteria virens*) | --/SSC<br>County Group 1 | Mature riparian woodland. | No | None | Suitable habitat does not occur on the site. |
| Loggerhead shrike (*Lanius ludovicianus*) | --/--<br>BCC/SSC<br>County Group 1 | Grassland, open sage scrub, chaparral, and desert scrub. | No | Moderate | Would likely have been observed/ detected if present. |
| California gull (*Larus californicus*) | --/WL<br>County Group 2 | Coastal areas and lakes. | No | Low | Suitable habitat does not occur on the site. |
| Coastal California gnatcatcher (*Polioptila californica californica*) | FT/SSC<br>County Group 1 | Coastal sage scrub in the coastal belt of southern California. | No | Low | Little appropriate habitat on site. Has potential to occur adjacent to property. Protocol surveys in 2008 were negative. |
| Western bluebird (*Sialia mexicana*) | --/--<br>County Group 2 | Primarily montane coniferous and oak woodlands, but can be found throughout San Diego County. | No | Low | Primary habitat does not occur on the site. |
| Common barn owl (*Tyto alba*) | --/--<br>County Group 2 | Woodlands and open areas with trees for shelter and perching. | No | Moderate | Suitable habitat occurs on the site. Not active during daytime. |
| Least Bell's vireo (*Vireo bellii pusillus*) | FE/SE<br>County Group 1<br>Narrow Endemic | Mature riparian woodland. | No | None | Suitable habitat does not occur on the site. |

| **Appendix C** (cont.)<br>**SENSITIVE FLORA AND FAUNA POTENTIAL SPECIES LIST – ORCHARD HILLS** | | | | | |
|---|---|---|---|---|---|
| **Common and Scientific Names** | **Sensitivity Code & Status*** (Federal, State, County, other) | **Habitat Preference/ Requirements** | **Verified on Site** (Yes/No; direct/indirect evidence) | **Potential to Occur on Site** (Observed or L/M/H/U) | **Factual Basis for Determination of Occurrence Potential** |
| **ANIMAL SPECIES** (cont.) | | | | | |
| **Mammals** | | | | | |
| Pallid bat (*Antrozous pallidus pacificus*) | --/SSC<br>County Group 2 | Roosts in caves, mines, bridges, crevices, abandoned buildings, and trees. | No | None | Appropriate habitat does not occur on site. |
| Ringtail (*Bassariscus astutus*) | --/--<br>County Group 2 | Riparian habitats and brush stands in moist forests at low to middle elevations. | No | Low | Suitable habitat does not occur on the site. |
| Dulzura California pocket mouse (*Chaetodipus californicus femoralis*) | --/SSC<br>County Group 2 | Primarily mature chaparral, but known from coastal sage scrub. | No | Moderate | Suitable habitat does not occur on the site, but is present adjacent to it. |
| Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*) | --/SSC<br>County Group 1 | Open areas of coastal sage scrub and weedy growth, often on sandy substrates. | No | Low | Some habitats on site suitable for species. |
| Mexican long-tongued bat (*Choeronycteris 10exicana*) | --/SSC<br>County Group 2 | Arid scrub, mixed forest, and canyons in mountain ranges rising from the desert. By day, usually in caves and mines, but sometimes in buildings near the entrance. | No | None | Appropriate habitat does not occur on site. |
| Townsend's big-eared bat (*Chorynorhinus townsendii*) | --/SSC<br>County Group 2 | Desert scrub, pine and pinyon-juniper forest. | No | None | Suitable habitat does not occur on the site. |

**Appendix C** (cont.)
**SENSITIVE FLORA AND FAUNA POTENTIAL SPECIES LIST – ORCHARD HILLS**

| **Common and Scientific Names** | **Sensitivity Code & Status*** (Federal, State, County, other) | **Habitat Preference/ Requirements** | **Verified on Site** (Yes/No; direct/indirect evidence) | **Potential to Occur on Site** (Observed or L/M/H/U) | **Factual Basis for Determination of Occurrence Potential** |
|---|---|---|---|---|---|
| **ANIMAL SPECIES** (cont.) | | | | | |
| **Mammals** (cont.) | | | | | |
| Stephens' kangaroo rat (*Dipodomys stephensi*) | FE/ST<br>County Group 1 | Sparsely vegetated habitats of sagebrush or annual grasses. | No | None | Appropriate habitat does not occur on site. |
| Spotted bat (*Euderma maculatum*) | --/SSC<br>County Group 2 | Montane forests of ponderosa pine. | No | None | Suitable habitat does not occur on the site. |
| Greater western mastiff bat (*Eumops perotis californicus*) | --/SSC<br>County Group 2 | Occurs in chaparral and oak woodland with coast live oaks and in arid, rocky areas. Roosts on or in buildings, trees, tunnels, and crevices in cliffs. | No | None | Appropriate habitat does not occur on site. |
| Mountain lion (*Felis concolor*) | --/--<br>County Group 2 | Generally semi-arid, mountainous terrain, subtropical and tropical forests, and swamps. | No | Low | Appropriate habitat does not occur on site. |
| San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) | --/SSC<br>County Group 2 | Occurs primarily in open habitats, including open coastal sage scrub, chaparral, grasslands, croplands, and disturbed areas (if there is at least some shrub cover present) | No | Moderate | Appropriate habitat occurs on site. |
| Western red bat (*Lasiurus blossevillii*) | --/SSC<br>County Group 2 | Roosts in orchards adjacent to streams or open fields, sometimes in urban areas. | No | Moderate | Suitable habitat occurs on the site. |
| California leaf-nosed bat (*Macrotus californicus*) | --/SSC<br>County Group 2 | Desert scrub; by day, abandoned mine tunnels | No | None | Appropriate habitat does not occur on site. |

| **Appendix C** (cont.)<br>**SENSITIVE FLORA AND FAUNA POTENTIAL SPECIES LIST – ORCHARD HILLS** | | | | | |
|---|---|---|---|---|---|
| **Common and Scientific Names** | **Sensitivity Code & Status*** (Federal, State, County, other) | **Habitat Preference/ Requirements** | **Verified on Site** (Yes/No; direct/indirect evidence) | **Potential to Occur on Site** (Observed or L/M/H/U) | **Factual Basis for Determination of Occurrence Potential** |
| **ANIMAL SPECIES** (cont.) | | | | | |
| **Mammals** (cont.) | | | | | |
| Small-footed myotis (*Myotis ciliolabrum*) | --/--<br>County Group 2 | Arid or short grass prairies, cliffs, talus, buttes, or riverbanks in prairie regions. | No | None | Suitable habitat does not occur on the site. |
| Yuma myotis (*Myotis yumanensis*) | --/--<br>County Group 2 | Found in a variety of habitats but typically associated with permanent water source. Roosts in buildings, under bridges, or in trees. Fairly tolerant of human presence. | No | None | Appropriate habitat does not occur on site. |
| San Diego desert woodrat (*Neotoma lepida intermedia*) | --/SSC<br>County Group 2 | Open chaparral or coastal sage scrub with clumps of cactus or yucca. | No | Low | Suitable habitat does not occur on the site. |
| Big free-tailed bat (*Nyctinomops femorosaccus*) | --/SSC<br>County Group 2 | Rocky areas. | No | Moderate | Suitable roosting habitat occurs on the site and adjacent to it. |
| Southern mule deer (*Odocoileus hemionus*) | --/--<br>County Group 2 | Coastal sage scrub, chaparral, grasslands, riparian and montane forests, cropland. | No | Moderate | Widespread and wide-ranging species that occurs in almost all scrub and wooded habitats. |
| Southern grasshopper mouse (*Onychomys torridus ramona*) | --/SSC<br>County Group 2 | Arid scrublands and low desert. | No | Low | Arid habitats do not occur on the site. |

| **Appendix C** (cont.)<br>**SENSITIVE FLORA AND FAUNA POTENTIAL SPECIES LIST – ORCHARD HILLS** | | | | | |
|---|---|---|---|---|---|
| **Common and Scientific Names** | **Sensitivity Code & Status*** (Federal, State, County, other) | **Habitat Preference/ Requirements** | **Verified on Site** (Yes/No; direct/indirect evidence) | **Potential to Occur on Site** (Observed or L/M/H/U) | **Factual Basis for Determination of Occurrence Potential** |
| **ANIMAL SPECIES** (cont.) | | | | | |
| **Mammals** (cont.) | | | | | |
| American badger (*Taxidea taxus*) | --/SSC<br>County Group 2 | Open plains and prairies, farmland, edges of woods. | No | Low | Marginally suitable habitat occurs on the site. Resident individuals are extremely unlikely. |

*Refer to Appendix D for an explanation of status codes

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# Appendix D

# EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES

## Appendix D
## EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES

### FEDERAL, STATE, AND LOCAL CODES

#### U.S. Fish and Wildlife Service (USFWS)

FE Federally listed endangered
FT Federally listed threatened

#### California Department of Fish and Game (CDFG)

SE State listed endangered
SR State listed rare
ST State listed threatened
SSC State species of special concern
WL Watch List
Fully Protected — Fully Protected species refers to all vertebrate and invertebrate taxa of concern to the Natural Diversity Data Base regardless of legal or protection status. These species may not be taken or possessed without a permit from the Fish and Game Commission and/or CDFG.

### OTHER CODES AND ABBREVIATIONS

#### Multiple Species Conservation Program (MSCP) Covered

Multiple Species Conservation Program covered species for which the City has take authorization within the MSCP area.

#### Narrow Endemic (NE) Species

Some native species (primarily plants with restricted geographic distributions, soil affinities, and/or habitats) are referred to as a narrow endemic species. For vernal pools and identified narrow endemic species, the jurisdictions will specify measures in their respective subarea plans to ensure that impacts to these resources are avoided to the maximum extent practicable.

## EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES

**OTHER CODES AND ABBREVIATIONS** (cont.)

**California Native Plant Society (CNPS) Codes**

**Lists**

1A = Presumed extinct.

1B = Rare, threatened, or endangered in California and elsewhere. Eligible for state listing.

2 = Rare, threatened, or endangered in California but more common elsewhere. Eligible for state listing.

3 = Distribution, endangerment, ecology, and/or taxonomic information needed. Some eligible for state listing.

4 = A watch list for species of limited distribution. Needs monitoring for changes in population status. Few (if any) eligible for state listing.

**List/Threat Code Extensions**

.1 = Seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)

.2 = Fairly endangered in California (20 to 80 percent occurrences threatened)

.3 = Not very endangered in California (less than 20 percent of occurrences threatened, or no current threats known)

A "CA Endemic" entry corresponds to those taxa that only occur in California.

All List 1A (presumed extinct in California) and some List 3 (need more information; a review list) plants lacking threat information receive no extension. Threat Code guidelines represent only a starting point in threat level assessment. Other factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences, are considered in setting the Threat Code.

# Appendix E

# CNDDB SENSITIVE SPECIES FORMS

Mail to:
*California Natural Diversity Database*
*Department of Fish and Game*
*1807 13th Street, Suite 202*
*Sacramento, CA 95814*
*Fax: (916) 324-0475 email: WHDAB@dfg.ca.gov*

*For Office Use Only*
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

**Date of Field Work:** 12 - 4 - 2006

Reset

# California Native Species Field Survey Form

Send Form

**Scientific Name:** *Accipiter cooperii*

**Common Name:** Cooper's hawk

**Species Found?** ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 1 Subsequent Visit? ☐ yes ☐ no
**Is this an existing NDDB occurrence?** _____ ☐ no ☐ unk.
Yes, Occ. #

Collection? If yes: _____ Number _____ Museum / Herbarium

**Reporter:** Seekey Cacciatore
**Address:** 7578 El Cajon Blvd, Suite 200
La Mesa, CA 91941
**E-mail Address:** Seekeyc@helixepi.com
**Phone:** (619) 462-1515

***Plant Information***

Phenology: _____ % vegetative _____ % flowering _____ % fruiting

***Animal Information***

_____ # adults _____ # juveniles _____ # larvae _____ # egg masses 1 # unknown

☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

***Location Description*** ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: San Diego Landowner / Mgr.: _____
Quad Name: San Marcos Elevation: 780-860 amsl
T 12S R 3W Sec 1 , ____ ¼ of ____ ¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____
T____ R __ Sec ____ , ____ ¼ of ____ ¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____
Datum: NAD27☐ NAD83☑ WGS84☐ Horizontal Accuracy _____ meters/feet
Coordinate System: UTM Zone 10☐ UTM Zone 11☑ *OR* Geographic (Latitude & Longitude)☐
Coordinates: Easting/Longitude _____ Northing/Latitude _____

***Habitat Description*** *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Diegan coastal sage scrub (including disturbed), non-native vegetation, extensive agriculture, disturbed habitat, and developed land.

Other rare species? Orange-throated whiptail *(Cnemidophorus hyperythrus beldingi)*

***Site Information*** Overall site quality: ☐ Excellent ☐ Good ☐ Fair ☑ Poor

Current / surrounding land use: Natural features within the vicinity of the project site include Merriam Mountains to the northeast. Surrounding land uses consist of single-family homes to the west, open space to the north and east, and pasture land to the south of the project site.

Visible disturbances: The site is primarily disturbed or supports an orchard.

Threats:

Comments:

***Determination:*** *(check one or more, and fill in blanks)*
☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

***Photographs:*** *(check one or more)*

| | Slide | Print | Digital |
|---|---|---|---|
| Plant / animal | ☐ | ☐ | ☐ |
| Habitat | ☐ | ☐ | ☐ |
| Diagnostic feature | ☐ | ☐ | ☐ |

May we obtain duplicates at our expense? ☐ yes ☐ no

Mail to:
*California Natural Diversity Database*
*Department of Fish and Game*
*1807 13th Street, Suite 202*
*Sacramento, CA 95814*
*Fax: (916) 324-0475 email: WHDAB@dfg.ca.gov*

*For Office Use Only*
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

**Date of Field Work:** 12 - 4 - 2006

Reset

# California Native Species Field Survey Form

Send Form

**Scientific Name:** *Cnemidophorus hyperythrus beldingi*

**Common Name:** Orange-throated whiptail

**Species Found?** ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 1 Subsequent Visit? ☐ yes ☐ no
**Is this an existing NDDB occurrence?** _____ ☐ no ☐ unk.
Yes, Occ. #

Collection? If yes: _____ Number _____ Museum / Herbarium

**Reporter:** Seekey Cacciatore
**Address:** 7578 El Cajon Blvd, Suite 200
La Mesa, CA 91941
**E-mail Address:** Seekeyc@helixepi.com
**Phone:** (619) 462-1515

**Plant Information**

Phenology: _____ % vegetative _____ % flowering _____ % fruiting

**Animal Information**

_____ # adults _____ # juveniles _____ # larvae _____ # egg masses 1 # unknown

☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

**Location Description** ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: San Diego Landowner / Mgr.: _____
Quad Name: San Marcos Elevation: 780-860 amsl
T 12S R 3W Sec 1 , ____ ¼ of ____ ¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____
T____ R __ Sec ____ , ____ ¼ of ____ ¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____
Datum: NAD27☐ NAD83☑ WGS84☐ Horizontal Accuracy _____ meters/feet
Coordinate System: UTM Zone 10☐ UTM Zone 11☑ *OR* Geographic (Latitude & Longitude)☐
Coordinates: Easting/Longitude _____ Northing/Latitude _____

**Habitat Description** *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Diegan coastal sage scrub (including disturbed), non-native vegetation, extensive agriculture, disturbed habitat, and developed land.

Other rare species? Cooper's hawk *(Accipiter cooperii)*

**Site Information** Overall site quality: ☐ Excellent ☐ Good ☐ Fair ☑ Poor

Current / surrounding land use: Natural features within the vicinity of the project site include Merriam Mountains to the northeast. Surrounding land uses consist of single-family homes to the west, open space to the north and east, and pasture land to the south of the project site.

Visible disturbances: The site is primarily disturbed or supports an orchard.

Threats:

Comments:

**Determination:** *(check one or more, and fill in blanks)*
☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

**Photographs:** *(check one or more)*

| | Slide | Print | Digital |
|---|---|---|---|
| Plant / animal | ☐ | ☐ | ☐ |
| Habitat | ☐ | ☐ | ☐ |
| Diagnostic feature | ☐ | ☐ | ☐ |

May we obtain duplicates at our expense? ☐ yes ☐ no

Mail to:
*California Natural Diversity Database*
*Department of Fish and Game*
*1807 13th Street, Suite 202*
*Sacramento, CA 95814*
*Fax: (916) 324-0475 email: WHDAB@dfg.ca.gov*

*For Office Use Only*
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

**Date of Field Work:** 12 - 4 - 2006

Reset

# California Native Species Field Survey Form

Send Form

**Scientific Name:** *Aimophila ruficeps canescens*

**Common Name:** southern California rufous-crowned sparrow

**Species Found?** ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 1-2 Subsequent Visit? ☐ yes ☐ no
**Is this an existing NDDB occurrence?** _____ ☐ no ☐ unk.
Yes, Occ. #

Collection? If yes: _____ Number _____ Museum / Herbarium

**Reporter:** Seekey Cacciatore
**Address:** 7578 El Cajon Blvd, Suite 200
La Mesa, CA 91941
**E-mail Address:** Seekeyc@helixepi.com
**Phone:** (619) 462-1515

## Plant Information

Phenology: _____ % vegetative _____ % flowering _____ % fruiting

## Animal Information

12 # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

## Location Description *(please attach map AND/OR fill out your choice of coordinates, below)*

County: San Diego Landowner / Mgr.: _____
Quad Name: San Marcos Elevation: 780-860 amsl
T 12S R 3W Sec 1 , ____ ¼ of ____ ¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____
T____ R ___ Sec ____ , ____ ¼ of ____ ¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____
Datum: NAD27☐ NAD83☑ WGS84☐ Horizontal Accuracy _____ meters/feet
Coordinate System: UTM Zone 10☐ UTM Zone 11☑ *OR* Geographic (Latitude & Longitude)☐
Coordinates: Easting/Longitude 117deg 8' 30.18" Northing/Latitude 33deg 9' 47.74"

## Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Diegan coastal sage scrub and eucalyptus woodland in largely disturbed lot roughly adjacent to Merriam Mountains RCA

Other rare species? Cooper's hawk
orange-throated whiptail

## Site Information

Overall site quality: ☐ Excellent ☐ Good ☐ Fair ☑ Poor

Current / surrounding land use: Natural features within the vicinity of the project site include Merriam Mountains to the northeast. Surrounding land uses consist of single-family homes to the west, open space to the north and east, and pasture land to the south of the project site.

Visible disturbances: The site is primarily disturbed or supports an orchard.

Threats:

Comments:

## Determination: *(check one or more, and fill in blanks)*

☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☑ Other: heard calling on site

## Photographs: *(check one or more)*

| | Slide | Print | Digital |
|---|---|---|---|
| Plant / animal | ☐ | ☐ | ☐ |
| Habitat | ☐ | ☐ | ☐ |
| Diagnostic feature | ☐ | ☐ | ☐ |

May we obtain duplicates at our expense? ☐ yes ☐ no

Mail to:
*California Natural Diversity Database*
*Department of Fish and Game*
*1807 13th Street, Suite 202*
*Sacramento, CA 95811*
*Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov*

**Date of Field Work (mm/dd/yyyy):** 06/26/2008

*For Office Use Only*
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

# California Native Species Field Survey Form

Send Form

**Scientific Name:** *Tetracoccus dioicus C. Parry*

**Common Name:** Parry's tetracoccus

**Species Found?** ☑ Yes ☐ No _____ If not, why?

Total No. Individuals ~ 50 Subsequent Visit? ☐ yes ☑ no

**Is this an existing NDDB occurrence?** _____ ☐ no ☑ unk.
Yes, Occ. #

Collection? If yes: _____ Number _____ Museum / Herbarium

**Reporter:** Doug Allen
**Address:** 7578 El Cajon Blvd
La Mesa, CA 91941
**E-mail Address:** _____
**Phone:** (619) 462-0552

## Plant Information

Phenology: _____% vegetative _____% flowering 100 % fruiting

## Animal Information

_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☑ other

## Location Description (please attach map AND/OR fill out your choice of coordinates, below)

Located in an unincorporated portion of San Diego County, bounded by the City of Escondido on the north and east and the City of San Marcos on the west. Specifically, the project site is located immediately northeast of Richland Road.

County: San Diego Landowner / Mgr.: Ms. Fran Curtis, D&J Development

Quad Name: San Marcos Elevation: 780 to 860 feet AMS

T 12S R 3W Sec 1, ____ ¼ of ____ ¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____

T____ R____ Sec ____, ____ ¼ of ____ ¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____

**DATUM:** NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy _____ meters/feet

**Coordinate System:** UTM Zone 10 ☐ UTM Zone 11 ☐ *OR* Geographic (Latitude & Longitude) ☐

**Coordinates:**

## Habitat Description (plant communities, dominants, associates, substrates/soils, aspects/slope):

Diegan coastal sage scrub (including disturbed), non-native vegetation, extensive agriculture, disturbed habitat, and developed land.

Other rare taxa seen at THIS site on THIS date: (separate form preferred) Yes, provided on separate form and previously submitted (Southern California rufous-crowned sparrow, orange-throated whiptail, and Cooper's hawk)

## Site Information

Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use:

Visible disturbances:

Threats:

Comments:

## Determination: (check one or more, and fill in blanks)

- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☐ By another person (name): _____
- ☐ Other: _____

## Photographs: (check one or more)

| | Slide | Print | Digital |
|---|---|---|---|
| Plant / animal | ☐ | ☐ | ☐ |
| Habitat | ☐ | ☐ | ☐ |
| Diagnostic feature | ☐ | ☐ | ☐ |

May we obtain duplicates at our expense? yes ☐ no ☐